Stocks Are From Mars, Real Estate Is From Venus: An Inquiry into the Determinants of Long-Run Investment Performance

By

Arvind Pai

Diploma in Architecture, 2000

TVB School of Habitat Studies

Submitted to the Department of Urban Studies and Planning
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Signature of Author_____
Arvind Pai
Department of Urban Studies and Planning
July 28th, 2006

Certified by_____
David M. Geltner
Professor of Real Estate Finance, Department of Urban Studies and Planning
Thesis Supervisor

Accepted by_____
David M. Geltner
Chairman, Interdepartmental Degree Program in Real Estate Development

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Abstract

This thesis presents an inquiry into the historical performance of core institutional real estate investment property during the 1984-2003 period. The focus of the analysis is on identifying systematic determinants of long run investment performance. The analysis seeks to increase our understanding of equilibrium asset pricing within this asset class, as well to provide some useful perspective for core portfolio strategic or tactical planning. This thesis extends earlier research by Geltner (1999) and Li and Price (2005) that indicated that a classical single-factor CAPM accurately modeled the cross-section of long-run total returns across the major asset classes, including real estate. The present thesis narrows that earlier focus to concentrate on the cross-section of long-run total return performance ***within*** the core institutional real estate asset class. This thesis uses the property level data of the NCREIF Index to construct portfolios and historical return indexes based on property size (value), and based on CBSA "tier" (that is, "upper", "middle", and "tertiary" cities from an institutional investment perspective).

By using unique portfolios created from the NCREIF property set that represent possible factors that systematically affect asset pricing, such as property location, property size and property type, and calculating their beta estimates from historical data, this thesis tests various CAPM models including the single factor Sharpe-Linter model, as well as a multi factor Fama-French-like model. The beta for the portfolios was defined with respect to the performance of the aggregate of all NCREIF properties.

This thesis finds that an equilibrium asset pricing model consisting of the two Fama-French-like factors, property size and MSA tier, plus property type dummy variables, explains some 90% of the long-run historical cross-section of core property portfolio returns. Interestingly, the "market factor", the beta with respect to aggregate NCREIF, is found to be insignificant, and possibly a ***negative*** influence on expected return. Furthermore, the size factor works opposite to the way it does in the stock market, with larger properties commanding an expected return premium. Surprisingly, the city "tier" factor gives an expected return premium to upper tier cities. Tests for an "income factor" (similar to the Fama-French book-to-market factor) found this factor to be insignificant. The most significant factor was found to be the property type. Thus, the equilibrium asset price model that seems to work well within the institutional core real estate asset class seems to be very different from, almost opposite to, the analogous model within the stock market.

Thesis Supervisor: David M. Geltner
Title: Professor of Real Estate Finance

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Acknowledgments

I am extremely grateful to my advisor Professor David Geltner for his guidance, encouragement and insights. Dr. Geltner has the unique ability to instill his passionate thirst for knowledge in his students and encourage them to strive for excellence. I thank him for leading me to the 'cutting edge' and beyond.

I would like to thank Cate Polleys (CRE 1997) and John Barrie (CRE 1994), who provided the 'seed' for this study. Their guidance and perspective proved invaluable for this research.

I am grateful to NCREIF for providing me with the database for this study. Without their contribution this study would not have been possible. I would also like to thank Jeff Fisher for his invaluable assistance and support.

Most importantly, I would like to thank my wife. Without her encouragement I would not be at M.I.T.

Introduction and Background

Introduction

With the recent increase in interest in the real estate asset class by investment fund managers there has been much focus on the allocation strategy *within* the real estate asset class. This study attempts to provide some guidance to real estate core fund portfolio managers by exploring the historical performance of core[1] properties within the NCREIF index from the 1984 to 2003 period.

Previous research by Geltner (1999) and Li and Price (2005) have indicated that a classical single-factor Capital Asset Pricing Model (CAPM) accurately modeled the cross-section of long-run total returns across the major asset classes, including real estate. It has been shown that "the basic Sharpe-Linter CAPM does work, in essence, for real estate after all, at least at a broad-brush level across the asset classes. This is the level that is useful for mixed-assets portfolios, that is, portfolios that potentially include all major asset classes."[Geltner and Miller (2001), p.572].

The present thesis narrows that earlier focus to concentrate on the cross-section of long-run total return performance ***within*** the core institutional real estate asset class. The focus of the analysis is on identifying systematic determinants of long run investment performance. Although it has been demonstrated [Geltner and Miller (2001), p.574] that that the basic single factor CAPM cannot be applied within the real estate asset class, this study attempts to test a multi factor asset pricing model over core properties within the NCREIF property set. Multi factor models have been tested successfully by the Ling and Naranjo (1997) paper, however my study is based on a different Fama and French like model that seems more directly applicable to the investment decision making process of portfolio managers.

To identify the potential systematic determinants or 'factors' that determine asset price I worked with factors that previous research has determined to be statistically significant or that represent

[1] Core is defined as properties that have regular capital expenditure and do not undergo substantial renovation or opportunistic repositioning.

specific identifiable characteristics of core commercial real estate that the market may price, and eliminating them if they proved insignificant.

Representing classical financial economics as proposed by the Sharpe-Linter CAPM, the 'market factor' was introduced as the primary factor. The property size (value) factor was also a potential determinant as demonstrated by Ziering and McIntosh (1999). Property location as determined by the CBSA "tier"(that is "upper", "middle" and "tertiary" from an institutional investment perspective) was also determined to be a significant factor by Hess and Liang (2005) although their definition of Tier is based on CBSAs with similar economic drivers rather than total investment value as in my study. An 'income' factor was also introduced to address the potential preference of investors for income return over capital return given that real estate investments are often long term in nature and provide significant and relatively stable cash flow.

By using unique portfolios created from the NCREIF property set that represent these factors, and calculating their beta estimates from historical data, I was able to test the various CAPM models including the single factor Sharpe-Linter model, as well as the multi factor Fama-French-like model. The beta for the portfolios was defined with respect to the performance of the aggregate of all NCREIF properties rather than with respect to the National Wealth Portfolio (NWP). This simplification avoids appraisal bias, and is consistent with classical CAPM theory under the assumption that the national wealth-based betas of property portfolios equals their betas with respect to NCREIF times the beta of the aggregate NCREIF portfolio with respect to national wealth.

Interestingly, the creation of these unique portfolios also allows me to explore the 'herd' mentality of the NCREIF members as demonstrated by the 'over weighted'[2] nature of the index in a few CBSAs and certain property types and sizes. By creating portfolios based on property type, property size (value), and based on CBSA "tier" (that is, "upper", "middle", and "tertiary"

[2] Over weighted as reflected by the high concentration of NCREIF assets in a few CBSAs that is far in excess of the proportionate contribution of these CBSA's to the US economy in terms of income, employment and population

from an institutional investment perspective), this study compares the historic performances of 'peripheral' and 'mainstream' properties on a risk-adjusted[3] basis.

The 1984-2003 period was selected as it represented an entire real estate 'cycle' and avoided the recent run up in real estate prices which I consider an anomaly that could possibly skew the data. Additionally, beginning from 1984 allowed me to have a sufficient number of properties in each portfolio so as to adequately represent the portfolio returns. This would have not have been the case had I started from 1978, the period that the NCREIF dataset began.

The study begins with a description of the relevant literature review that formed the basis for this study and is followed by a section focused on both the methodology for the generation of the unique portfolios, as well as on the methodology for the asset pricing models. The next section focuses on the findings of the asset pricing models and presents the data for the most appropriate model. This is followed by a section that summarizes and concludes the study and describes its relevance to the decision making process for real estate core fund managers. The last section lists the limitation of this study and suggestions for future research.

So let's begin "Stock Are From Mars, Real Estate Is From Venus" and in the words of a very wise professor[4] "the important thing is to enjoy yourself".

Literature Review

The starting point of this research is based on the Capital Asset Pricing Model (CAPM). [Sharpe (1964), Lintner (1965)]. The CAPM first introduced the concept of separating risk into systematic risk and idiosyncratic risk. Systematic risk is the risk associated with holding the market portfolio and it is rewarded by the capital market. Idiosyncratic risk is specific to a particular asset and can be diversified away when held in combination with other assets and, thus, is not rewarded by the capital market. CAPM theory says that an asset's contribution to portfolio risk depends on the asset's sensitivity to changes in the value of the market portfolio.

[3] The measure of risk in this section of the study is the Market Beta where the Market is defined as the aggregate NCREIF investment portfolio.
[4] Yes, it is Prof. David Geltner

Systematic risk, or the marginal contribution of a given asset to the risk of the market portfolio, can be measured using beta. Beta is calculated[5] as follows:

$\beta_i = cov(r_i,r_m) / \sigma_{m2}$

where

- $cov(r_i,r_m)$ is the covariance between the asset return and the market return, and
- σ_{2m} is the variance of the market return

After calculating beta, the remainder of the CAPM formula is:

$E(r_i) = r_f + \beta_i[E(r_m)-r_f]$

where

- $E(r_i)$ is the expected return of an asset
- r_f is the risk free rate
- $\beta_i[E(r_m)-r_f]$ is beta times the market price of risk (or risk premium)

There are of course certain simplifying assumptions made by this model such as the absence of secondary costs such as taxes and transaction costs. This model also assumes that all investors have identical investment horizons, identical perceptions regarding expected returns, volatilities and correlations.

The returns provided by the market have been compared with the results of the empirical testing of the CAPM model. Most tests take a representative value weighted index, such as the S&P 500 as a proxy for the market portfolio, and then check whether the historical average return on a security can be explained by the equation. These studies focus on whether beta alone can explain

[5] The author would like to acknowledge that part of this literature review is based on that done by Nan Li and Steven Price for their thesis on Multiple Asset Class Investing, MIT Center for Real Estate, August 2005.

the historical average returns on portfolios. Although the results support the concept of a linear relationship between expected return and beta, the simple beta calculation doesn't present the most accurate measure of expected return. Two important early tests were by Black, Jensen and Scholes (1972) and Fama and McBeth (1973). More recent studies include Fama and French (1992) and Black (1993).

The most relevant CAPM based model was proposed by professors Fama and French. In their 1992 paper, they conclude that there are three factors which together do a good job of explaining risk pricing by the capital market. The factors are a market factor, a size factor and a book-to-market factor. The proposed CAPM based model has been described below:

$$E(r_i) = r_f + \beta_{market}(r_{market\ factor}) + \beta_{size}(r_{size\ factor}) + \beta_{book\text{-}to\text{-}market}(r_{book\text{-}to\text{-}market\ factor})$$

Where

• market factor: return on market index minus risk-free interest rate
• size factor: return on small-firm stocks less return on large firm stocks
• book-to-market factor: return on high book-to-market-ratio stocks less return on low book-to market-ratio stocks. [Breeley and Myers (2001), p.209]

This model has been found to be fairly accurate in describing market pricing of securities within the stock market. This approach has been used extensively in this thesis to model real estate asset pricing by the market.

The Geltner and Liu dissertations have found that "the basic Sharpe-Lintner CAPM does work, in essence, for real estate after all, at least at a broad-brush level *across* the asset classes. This is a level that is useful for broad strategic and tactical investment policy making for managers responsible for mixed-asset portfolios, that is, portfolios that potentially include all the major asset classes."[Geltner and Miller (2001), p.572].

The CAPM should conceptually work within the real estate asset class, however the Geltner study has shown that "the basic CAPM, with a single risk factor based on asset periodic returns volatility or covariance with a single risk benchmark, does not seem to work very well." [Geltner and Miller (2001), p.574]. As a result much of the recent asset price testing involving real estate moved away from the standard single-factor CAPM in the direction of more robust multi-factor modeling. The empirical advantage of multi-factor models, "from a statistical perspective, (is that) the more explanatory variables you have in the right-hand side of a regression of asset returns onto risk factors, the more variability in asset returns you can explain with the regression." [Geltner and Miller (2001), p.579].

The most interesting of these multi factor models has been the one proposed by Professors Ling and Naranjo (1990). Their study moved beyond the scope of the previous studies that simply looked at publicly traded real estate and actually applied arbitrage pricing theory (APT) modeling to private real estate. They noted that many studies have focused on the linkages between stock and bond market returns and macroeconomic events such as fluctuations in interest rates, inflation rates and industrial production. They suggest that due to the comovements of real estate and other asset prices these same systematic risk factors were most probably priced in real estate markets. Their findings are described in two articles, Ling and Naranjo (1997) and Ling and Naranjo (1998).

Their study identified the changes in real estate per capita consumption, the real T-bill rate, the term structure of interest rates, and unexpected inflation as fundamental drivers or "state variables" that systematically affect real estate returns. They also introduced "conditioning variables" that are not risk factors per se but are prior characteristics of the assets that help to predict ex-post returns. Factors used in my model are property specific as opposed to the macro economic risk factors used by Ling and Naranjo.

There have been several studies that explore factors that although are not perceived as 'risks' in the traditional sense, yet are priced by the market. An interesting paper by Ziering and McIntosh (1999) investigates the relationship between property size and risk-return profile. The paper analyzes the performance of 4 property size classes within the NCREIF property universe -

below $20 million, $20 million-$40 million, $40million-$100 million, and over $100 million - across the 1981-1998 period and within the 4 imbedded phases of the real estate cycle. The results indicated that property size is a powerful moderator of risk/return across the spectrum of size, and that the largest category of property, while providing investors with the highest average return, also exhibits the greatest volatility. The study also showed that there is a significant difference in the 'price of risk' (i.e. return per unit of risk) between these sizes demonstrating that asset volatilities and covariance are not the sole factors priced by the market.

The Ziering and McIntosh study led to the inclusion of the size factor in the asset pricing model developed in my thesis.

The other interesting study was done by Hess and Liang (2005). They created portfolios based on the size-tiered economic geography groups from the NCREIF data set. They grouped the top-35 U.S. metro areas into seven investment clusters based on size, economic structure and geographical location. Metro areas beyond the top 35 were named opportunistic markets, and they collectively represent only 5% of institutional real estate investments. The top-nine markets are called anchor markets; they are the largest US metro areas and are representative of the investment characteristics of their respective clusters. The 26 markets that are not anchors are called major markets and belong to one of the seven clusters.

Interestingly, the nine anchor markets account for about two-thirds of NCRIEF investment value and nearly half of property value held by public REITS. By contrast about 30% of U.S. income. Employment and population stem from these markets. The 26 major markets host about 30% of NCREIF and 30% of REIT investment value, and about one-quarter of U.S. income, employment and population. This demonstrates the 'over weighted' characteristic of the NCREIF property universe.

The study concludes "Analyzing the return characteristics of NCREIF investments by clusters seems to verify that diversification using this approach can provide portfolio benefits. Relatively low return correlations between some categories suggest that risk reduction is possible through diversification." Although the study displayed an attempt to categorize real estate, the differing

‘pricing of risk’ of these categorizes demonstrates that there are other factors attributed to the US Metros that are being priced by the market.

This large disparity in investment value and the ‘market price of risk’ between the top nine anchor markets, the next 26 major markets and the opportunistic markets led me to include the property’s ‘Tier’ location as a possible factor priced by the market, in my investigation.

Methodology & Data

Methodology in Brief

The main objective of this study is to provide some guidance to real estate core fund portfolio managers by exploring the historical performance of core properties within the NCREIF property set from the 1984 to 2003 period. The focus of the analysis is on identifying systematic determinants of long run investment performance. The study is composed of two parts, the first involves working with the NCREIF property level data to create distinct portfolios and the second involves testing of various assets pricing models on these portfolios. The models range from the single factor CAPM to a multi factor Fama and French based model.

Part I

This involves using the property level data of the NCREIF Index to construct portfolios and historical return indexes based on property size (value), and based on CBSA "tier" (that is, "upper", "middle", and "tertiary" cities from an institutional investment perspective). These are factors that may be systematic determinants of long run investment performance. This stage involved analyzing the data and experimenting with several categorizations for creating the size and tier portfolios (obviously property type is easy), to arrive at a portfolios that are distinct and yet have adequate number of properties to be adequately representative.

Part II

This involved the testing of these portfolios with various asset pricing models.

By observing the historic returns of these portfolios alone, no useful insight can be provide relating to tactical investment decisions as the return can never be viewed separately from risk. The introduction of risk was done be applying the CAPM on these portfolios. Market[6] Betas for

[6] The Market is defined as the NCREIF aggregate property set.

these portfolios were calculated using a time series regression and a cross sectional regression was run using these Market Betas to determine the accuracy of the model.

By charting the Market Betas as representative of risk with the historic returns for these portfolios and creating 'clouds' around portfolios with similar factors (i.e. a 'tier' cloud, 'size' cloud and property type cloud) and observing their dispersion I could identify if these factors where systematically priced by the market.

Although the single factor CAPM does provide some useful insights the search for a more accurate model led to the development of several other equilibrium asset pricing models The introduction of the size factor, the tier factor, the income factor and the property type factor, resulted in a significant model with a high R square that accurately models the market pricing of commercial institutional quality real estate assets.

This is a potentially useful tool for investment managers in making tactical ex ante investment decisions as well gauging ex-post investment manager performance.

The detailed methodology for each step has been described below.

Detailed Methodology Part I – Data Analysis

The NCREIF Database

The NCREIF[7] database contributed the underlying data used for this study. The National Council of Real Estate Investment Fiduciaries (NCREIF) is an association of institutional real estate professionals who amongst other activities, collect and process detailed property level data provided by the data contributing members. The data contributing members comprise of investment managers and plan sponsors who own or manage real estate in a fiduciary setting. They represent institutions and corporations ranging from pension funds to asset management companies. Thus the dataset represents institutional quality commercial real estate. The dataset

[7] For further information on NCREIF ref: www.ncreif.com

began in 1978 with 233 properties totaling a value of $580 million and has expanded rapidly to 4756 properties with a value of $201 billion in 2006 Q1.

NCREIF also produces the NCREIF Property Index (NPI), a quarterly index that shows real estate performance returns using the data submitted by the Data Contributing Members. The NPI is used as an industry benchmark to compare an investor's own returns against the industry average

The income, capital and total returns for my study were calculated directly from the property level data using the formula used by NCREIF. They are described below:

Income Return

$$\frac{\text{Net Operating Income}}{\text{Beginning Market Value + 1/2 Capital Improvements - 1/2 Partial Sales - 1/3 NOI}}$$

Capital Value Return

$$\frac{\text{(Ending Market Value - Beginning Market Value) + Partial Sales - Capital Improvements}}{\text{Beginning Market Value + 1/2 Capital Improvements - 1/2 Partial Sales - 1/3 NOI}}$$

Total Return

Income Return + Capital Value Return

Selecting Core Properties

This study is focused on core investments i.e. stabilized properties without excessive capital expenditures and does not included any opportunistic development or repositioning of these assets. For this reason I have made a somewhat arbitrary distinction of eliminating the data of any property in the quarter for which its capital expenditure (Capex) is greater than 20% of its market value entering into the quarter (Beginning Market Value). Although 20% itself may seem a high number I have attempted to create a balance as it is true that even core properties occasionally require a significant capital expenditure for major renovations, in order to maintain their cash flow.

Selecting the Time Period

The study focused on the performance of properties from 1984 Q1 to 2003 Q4, thus providing me with 20 years of data and 80 data points for a quarterly analysis. The 1984-2003 period was selected as it represented a complete real estate cycle. Additionally, the lower number of properties and suspect accuracy of data in the pre 1984 period as well as the recent run up in real estate prices post 2003, may have introduced inaccuracies in the study.

Creating the Portfolios

The portfolios were created from the NCREIF database using the Microsoft Access program. There were a total of 38 portfolios created from the database. There were 18 portfolios each for the Size and Tier factor resulting from the six property types being further categorized into three classes each for Size and Tier. Additionally there were two portfolios created from all property types representing high and low income returns.

The Property Type Selection

The four main[8] property types were selected with two property types being represented by two further classifications. The property types classifications are Apartments, Retail, Office located in Central Business Districts (CBD), Office located in the Suburban areas, Industrial Warehouse, and Industrial R&D + Flex.

The Retail classification includes all institutional quality retail excluding Regional and Super Regional Malls. This exclusion was deemed necessary as Regional and Super Regional Malls are normally not held in core real estate funds and are mostly held by focused Mall REITS as such properties require specialized management and consolidated holdings to perform competitively.

Apartments were analyzed as one property type. Although further classification into high rise and garden style would have been beneficial, this classification is fairly recent in the NCREIF database and thus would not provide sufficient data dating back to 1984.

Office was divided into Office CBD and Office Suburban as their performance is viewed to be systematically different.

Similarly Industrial was further analyzed as Warehouse and R&D + Flex. Manufacturing was excluded as Manufacturing properties are normally not part of the core real estate fund portfolio. Flex was consolidated with R&D as they perform similarly.

Although further classification of property types would be beneficial and allow for a more detailed analysis I had to balance the accuracy of the research with the number of property types. The increased classification will result in fewer properties in each portfolio especially in the early part of the database. This could result in the idiosyncratic returns of a property significantly affecting the return of the entire portfolio.

[8] Hotel was not examined in this study due to the lack of a significant number of properties in the NCREIF dataset.

The Size Selection

The size portfolios were created based on the market value of the properties and creating high and low cutoffs. The distribution of the value of properties was considered normal about the average value. The Low Cut was 0.58 * Average Market Value and the High Cut was 1.42 * Average Market Value. This was done in order to have an equal number of properties in each class. This High Cut and Low Cut values were updated every year to reflect the change in capital value over the years. A total of six categories i.e. Apartments, Office Suburban, Office CBD, Warehouse, Flex and R&D, Retail (excluding regional and super regional malls), were created.

An example of the creation of the Apartments size classification is shown below:

<u>For Apartments</u>

Average Market Value (year t) = Average of (Ending Market Value + Partial Sales) in year t.

High Cut Year t = Average Market Value (year t) * 1.42

Low Cut Year t = Average Market Value (year t) * 0.58

Small Apartments portfolio in year t: All apartments that have an Ending Market Value plus Partial Sales less than the Low Cut year t value.

Medium Apartments portfolio in year t: All apartments that have an Ending Market Value plus Partial Sales between the Low Cut value and High Cut value in year t.

Large Apartments portfolio in year t: All Apartments that have an Ending Market Value plus Partial Sales above the High Cut year t value.

The observed final distribution was found to have a larger number of properties falling in the Medium Size category. However there are sufficient a number of properties across the time series in each Size category to ensure an accurate representation.

Interestingly the distribution was differently skewed for each property type although I did ensure that each type was suitably represented.

The performance of the Size portfolios has been provided in a chart form (refer Figure 1 to 18) and the data has been provided in a numeric form in the Appendix (refer Appendix Table 12 to 17).

Charts – Size Portfolios by Property Type

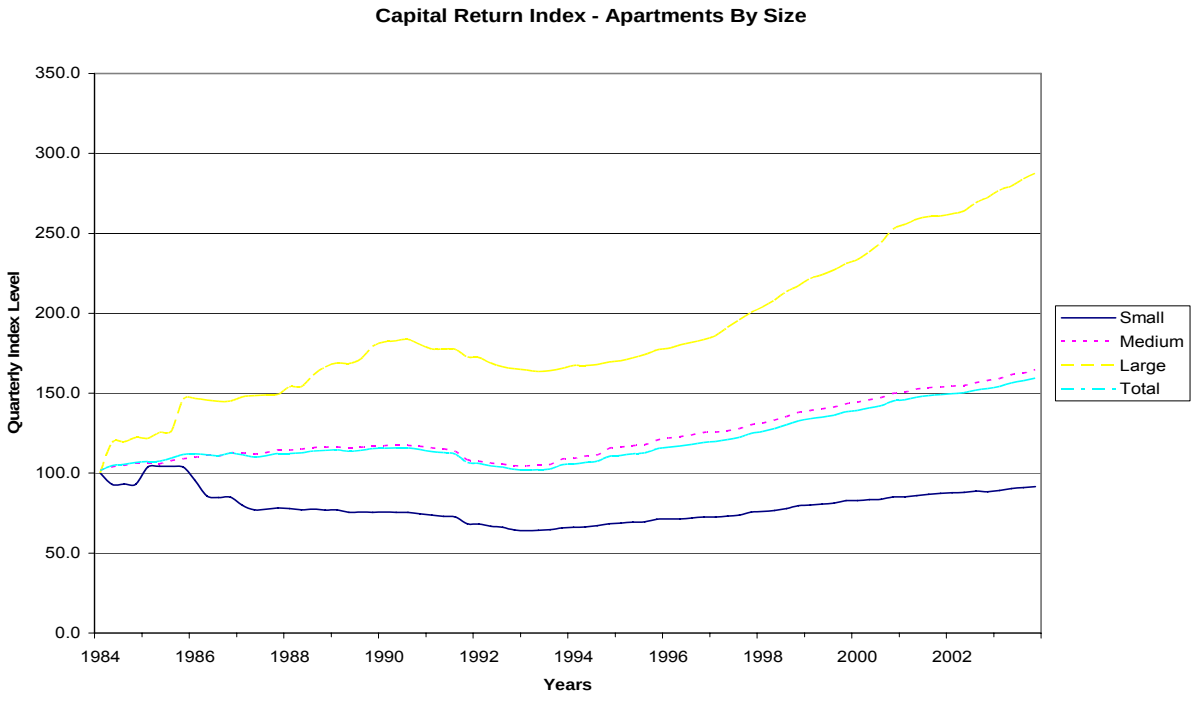
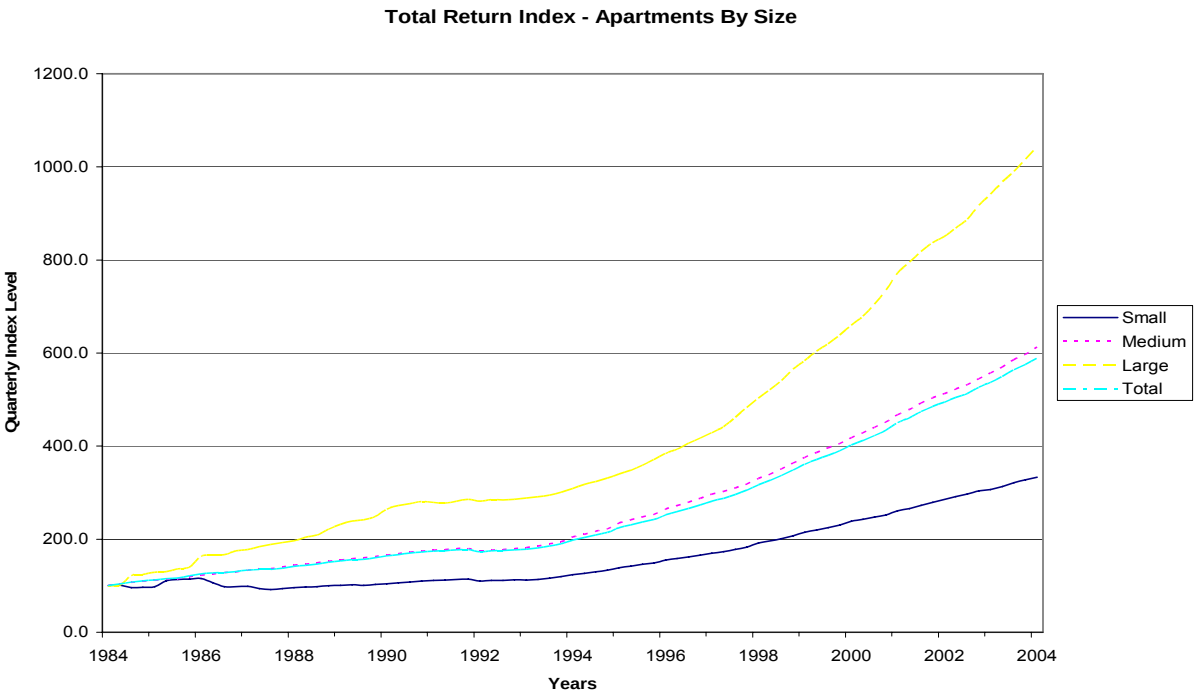


Figure 1



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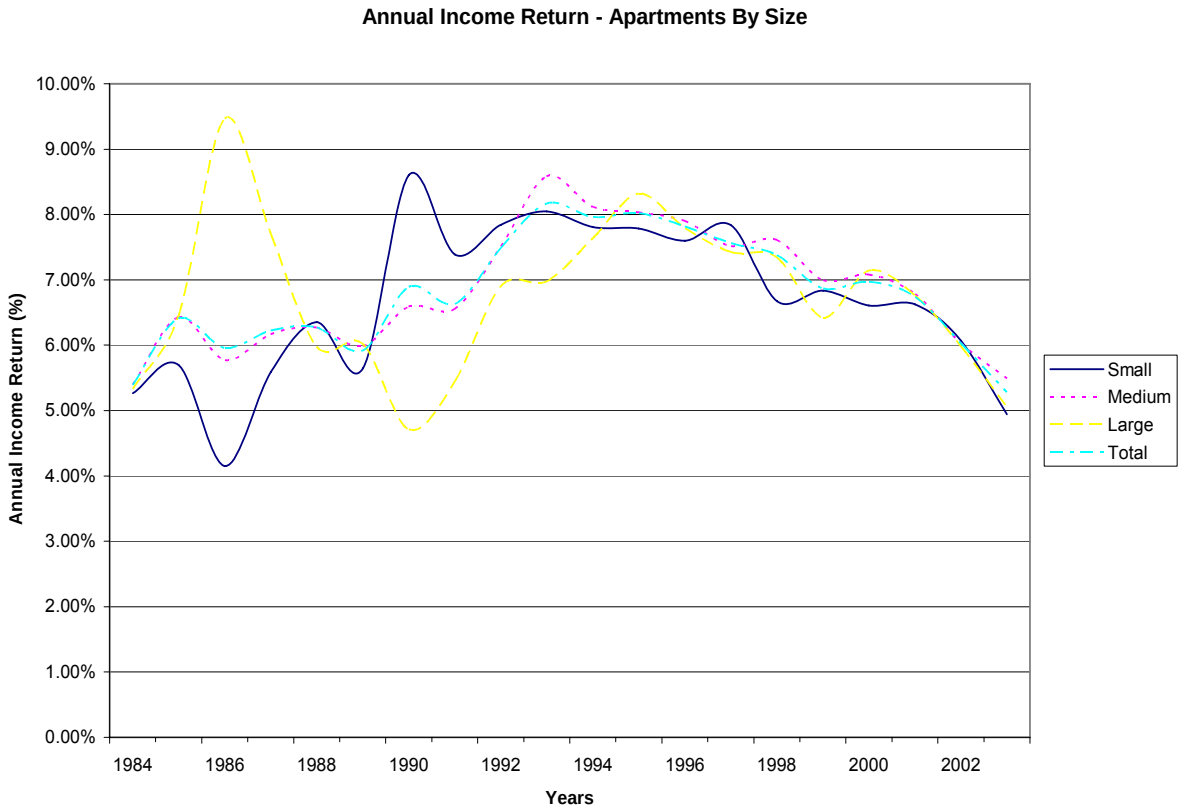

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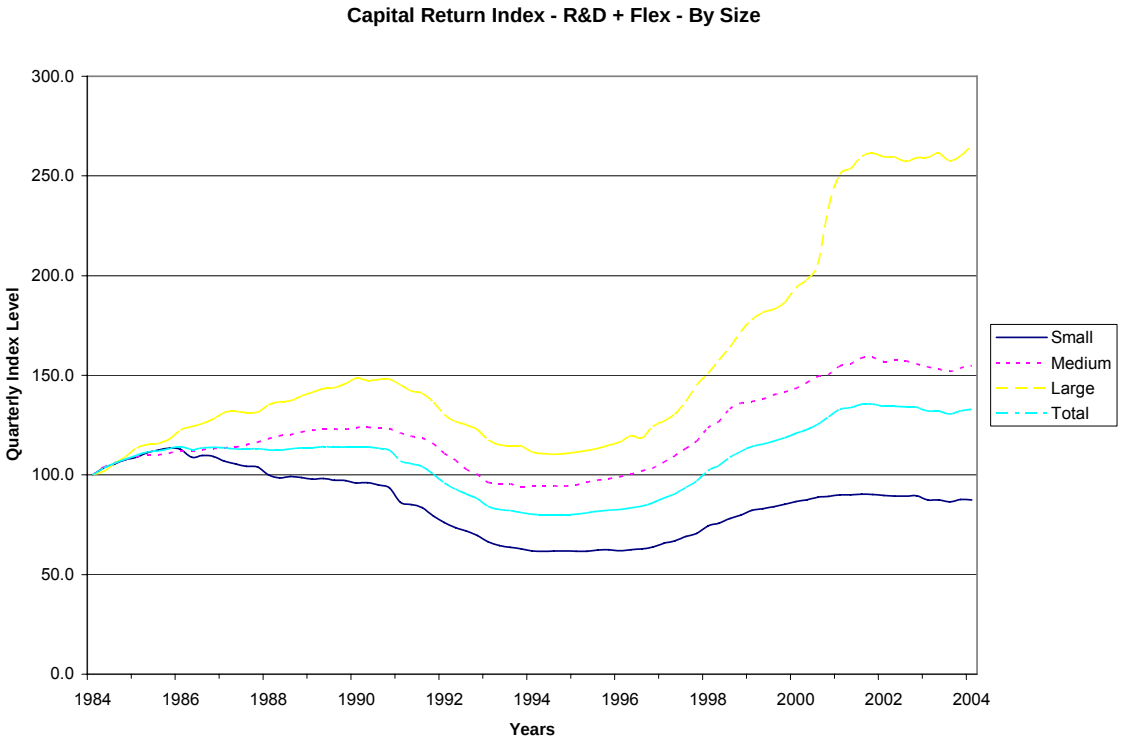

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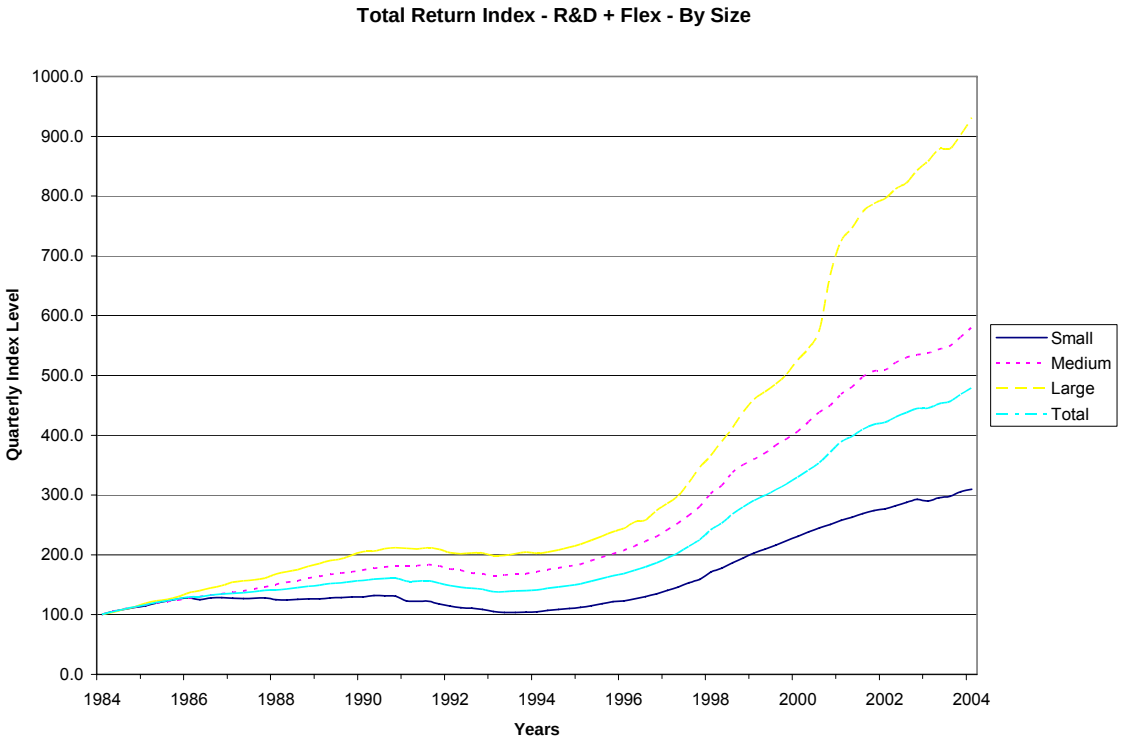


Figure 5

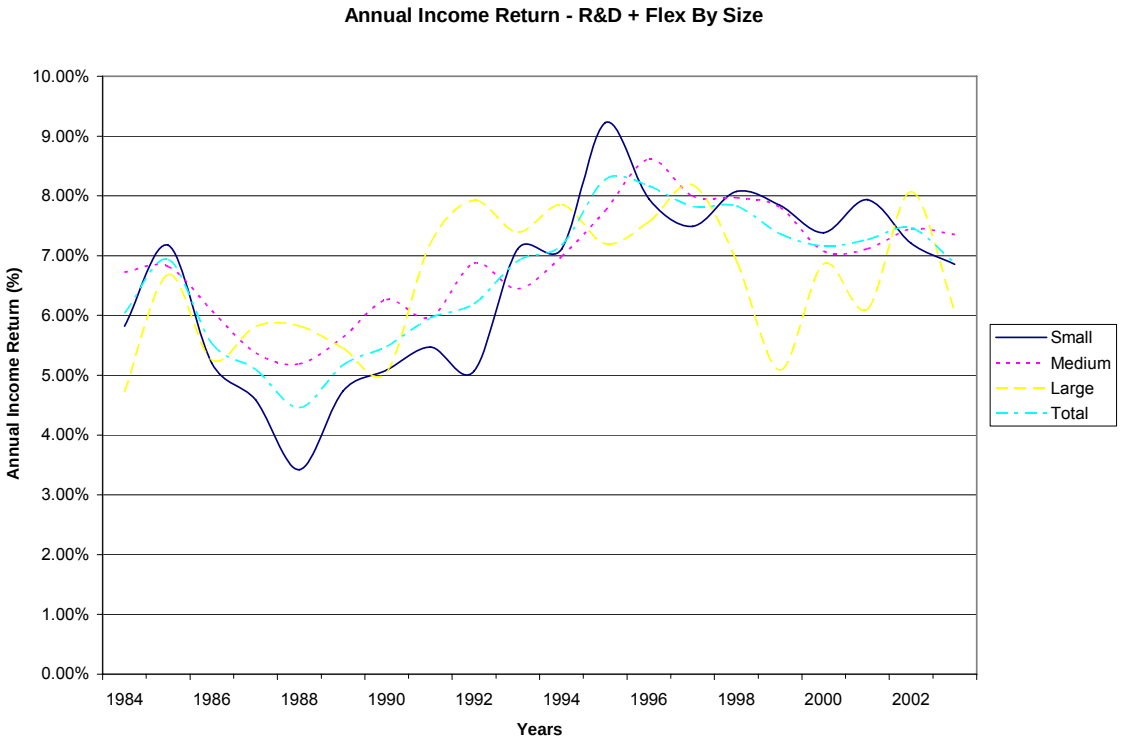


Figure 6

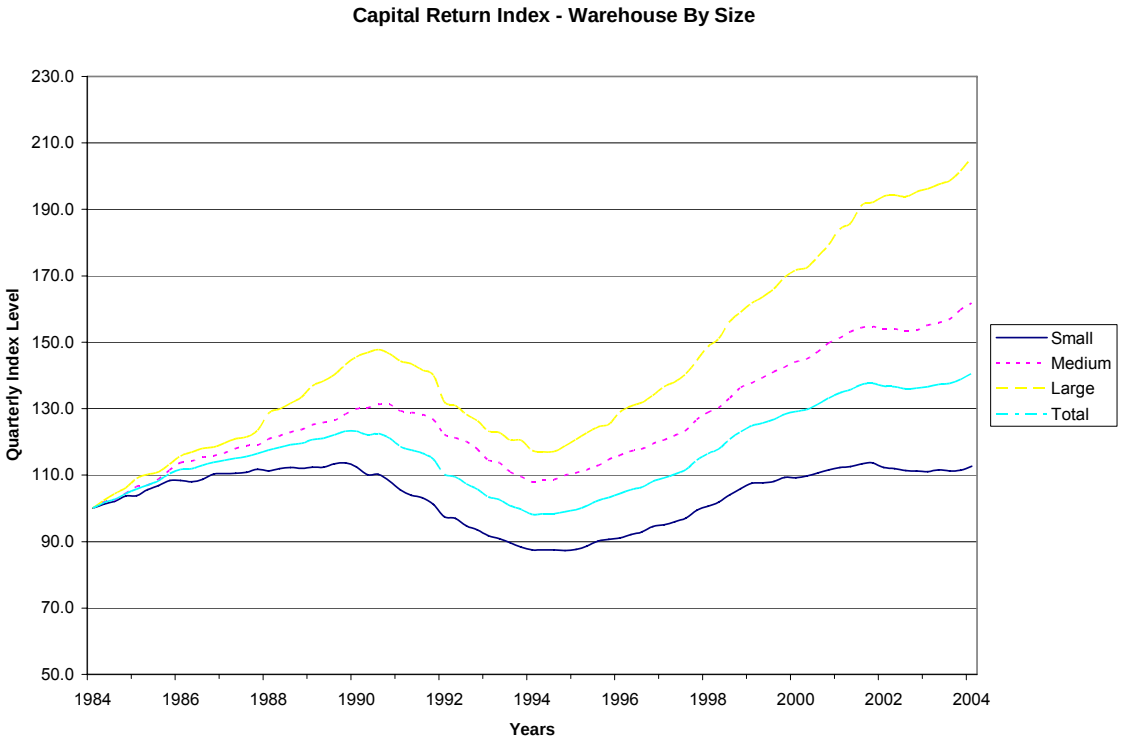


Figure 7

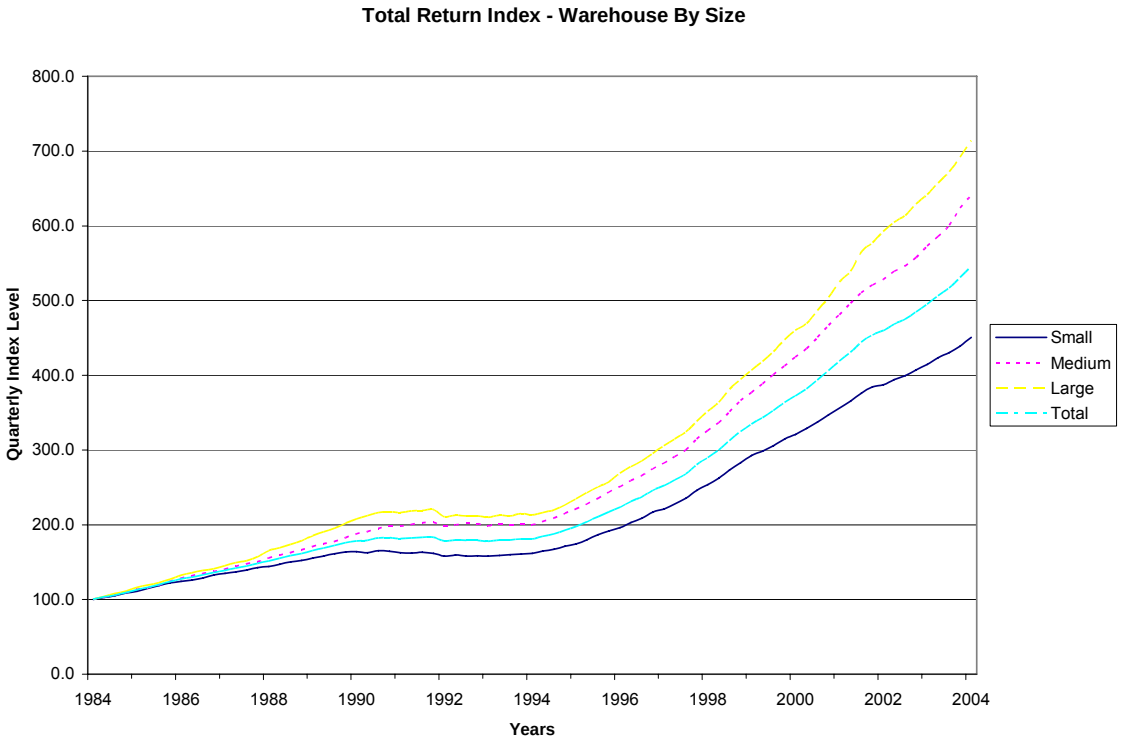


Figure 8

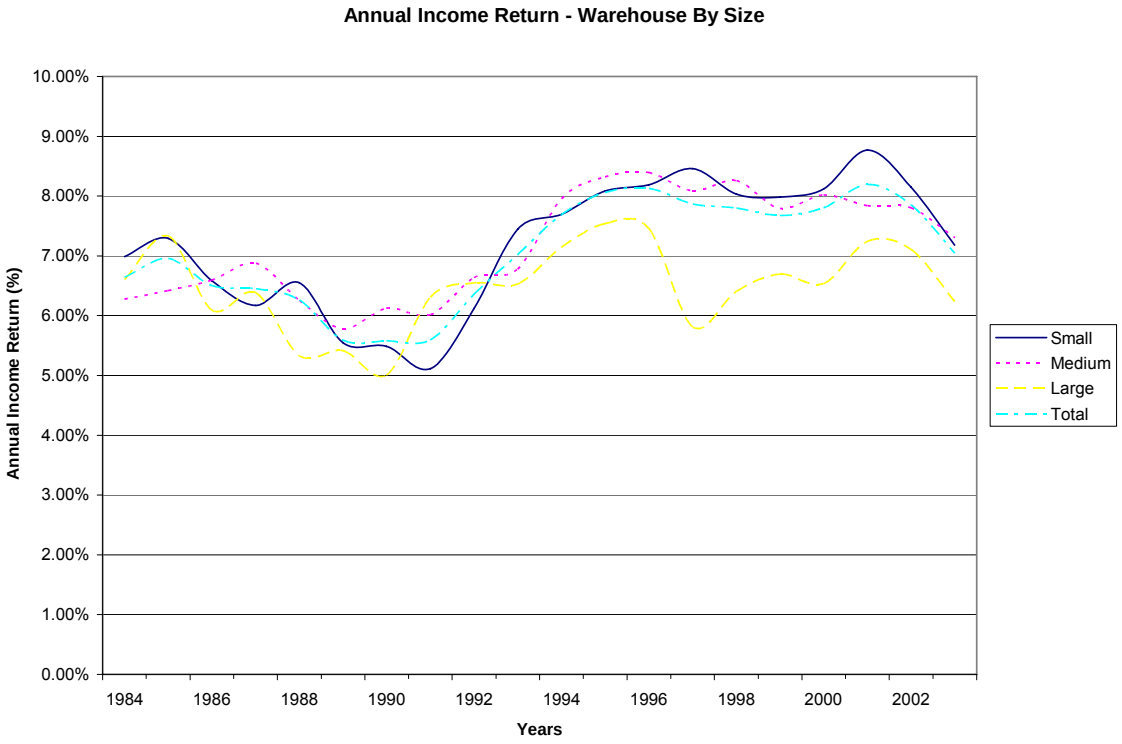
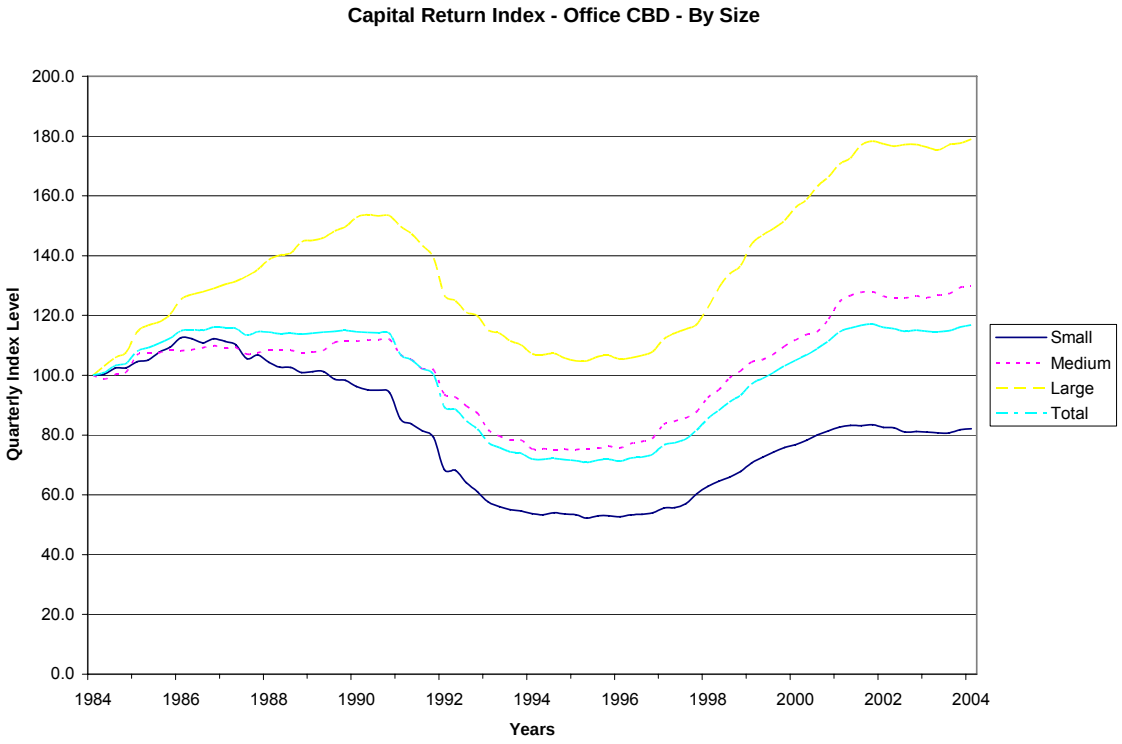


Figure 9



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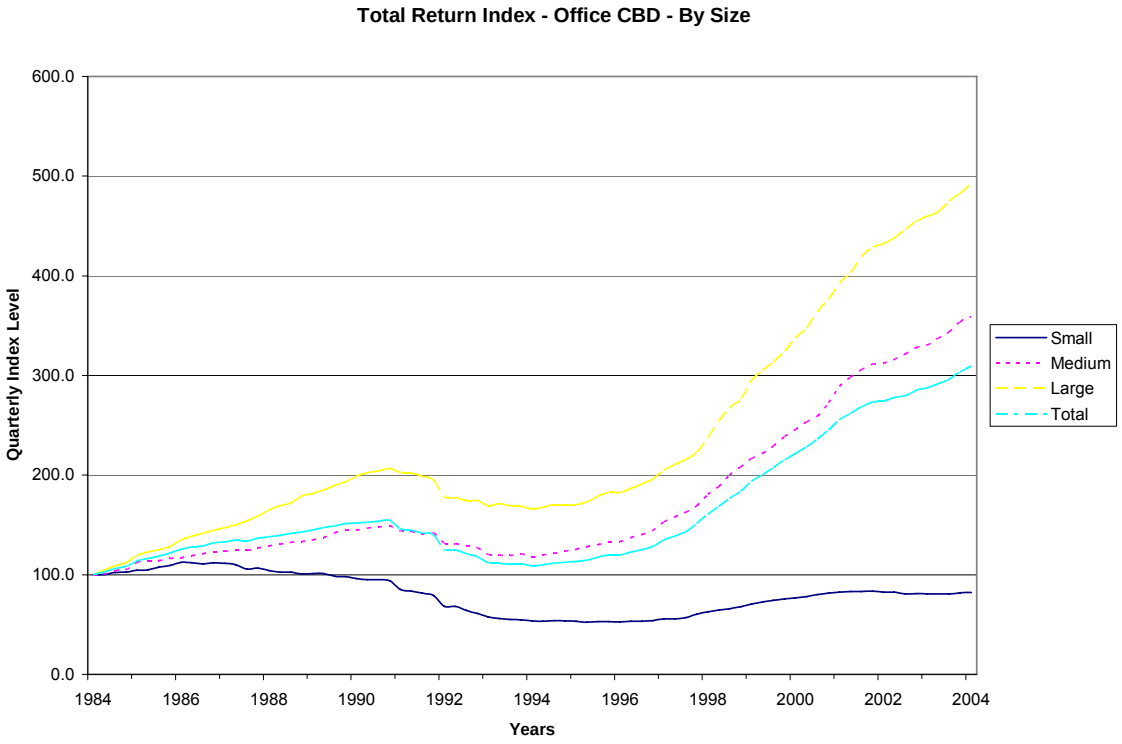

Figure 11

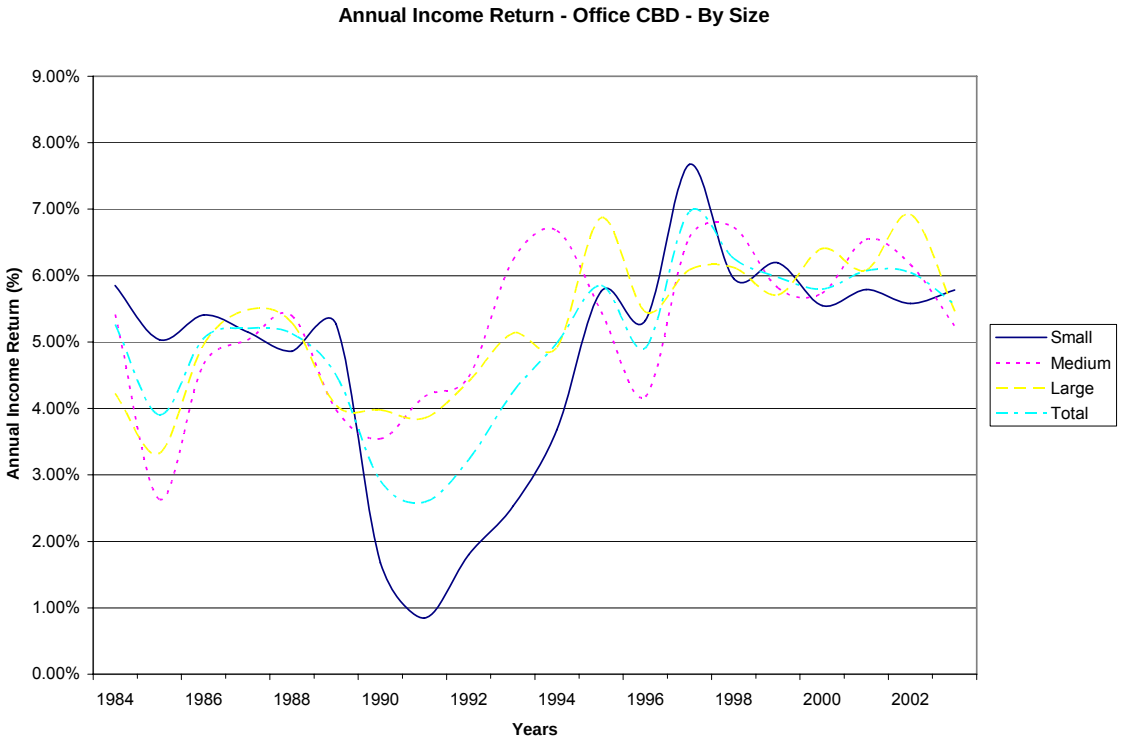

Figure 12

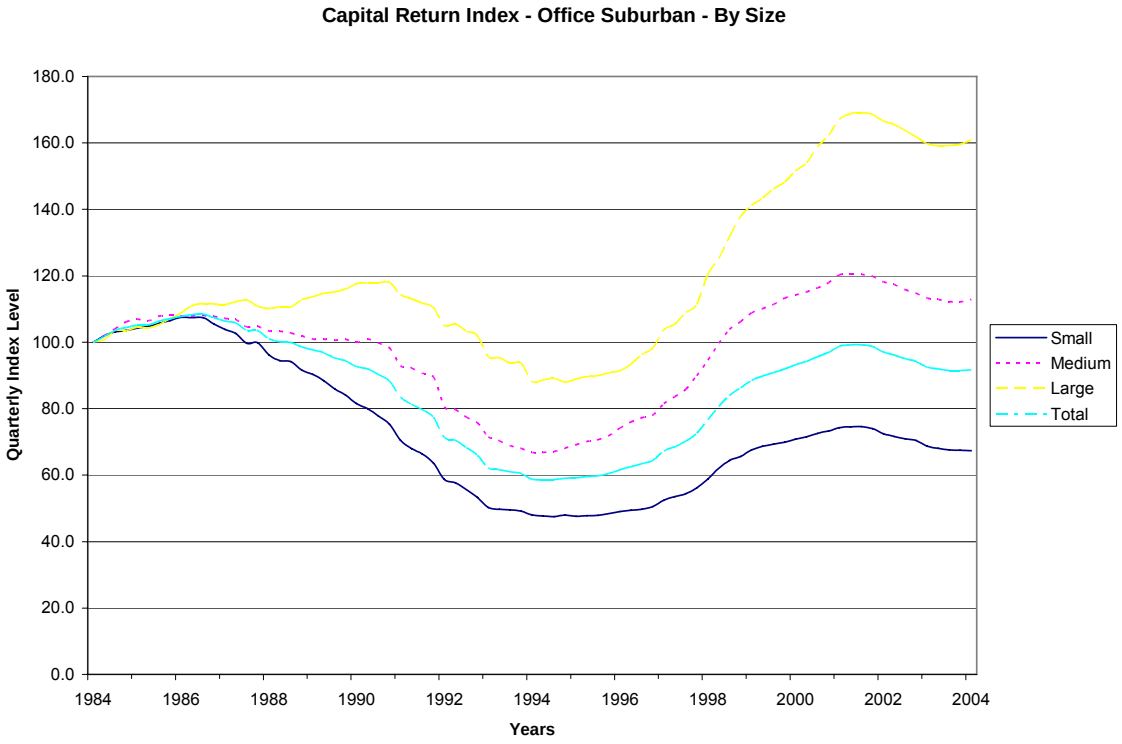

Figure 13

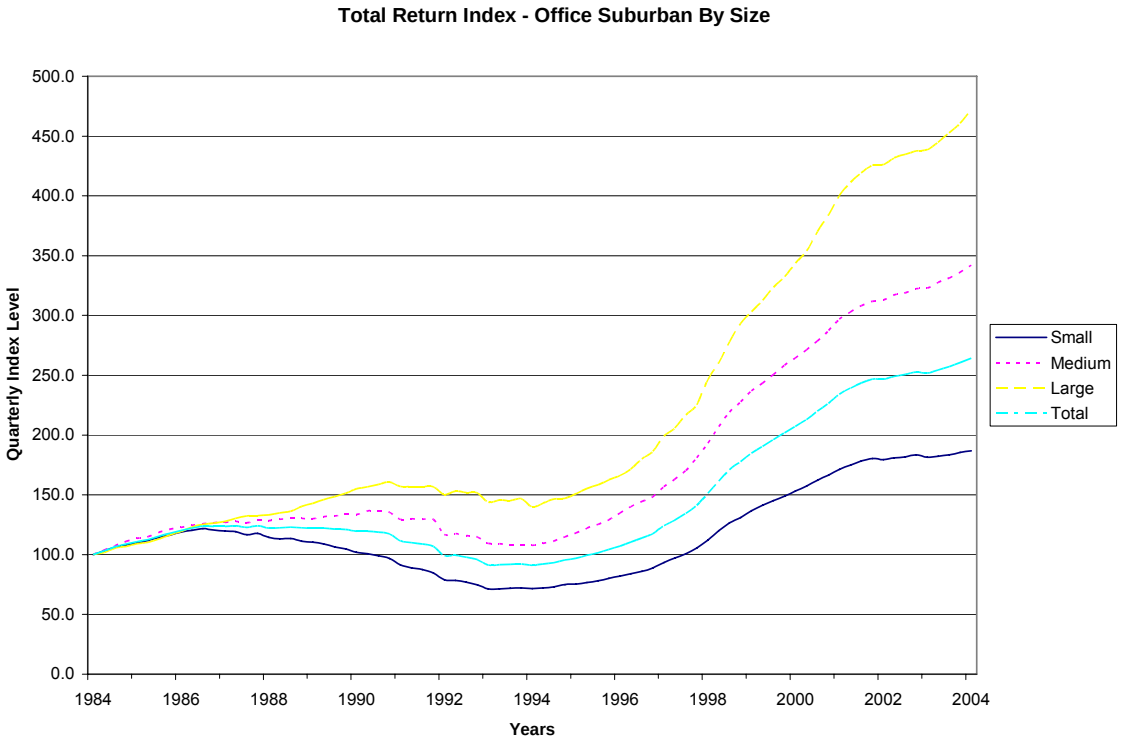

Figure 14

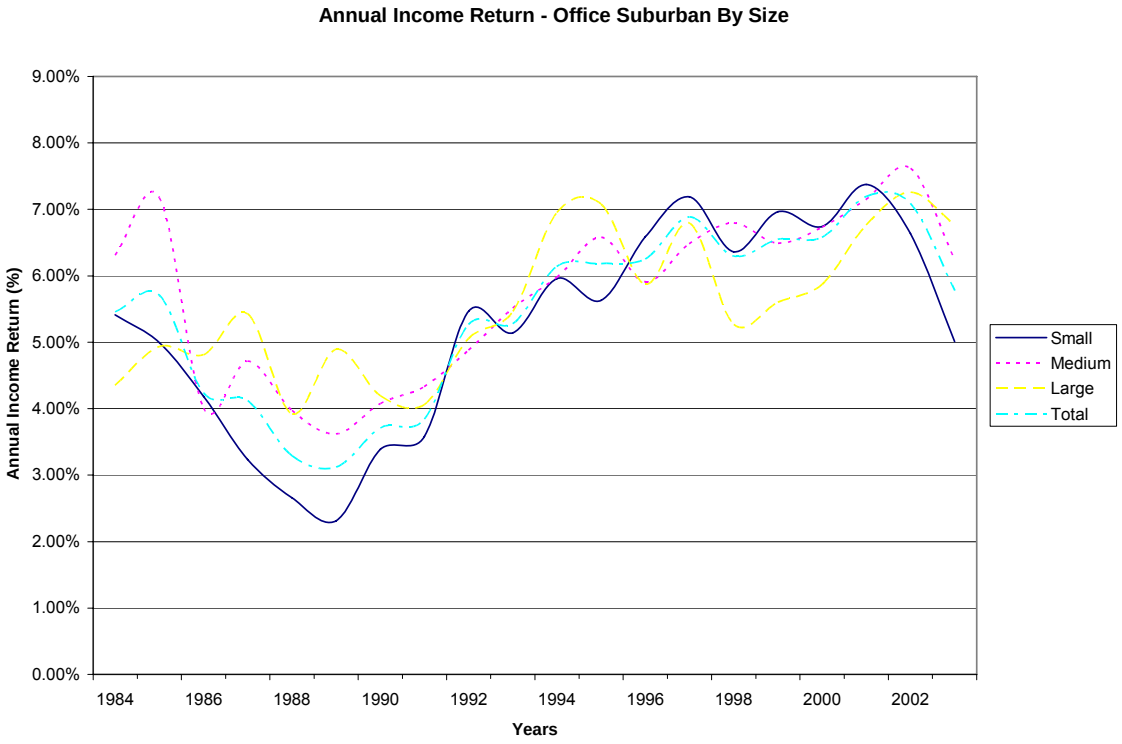

Figure 15

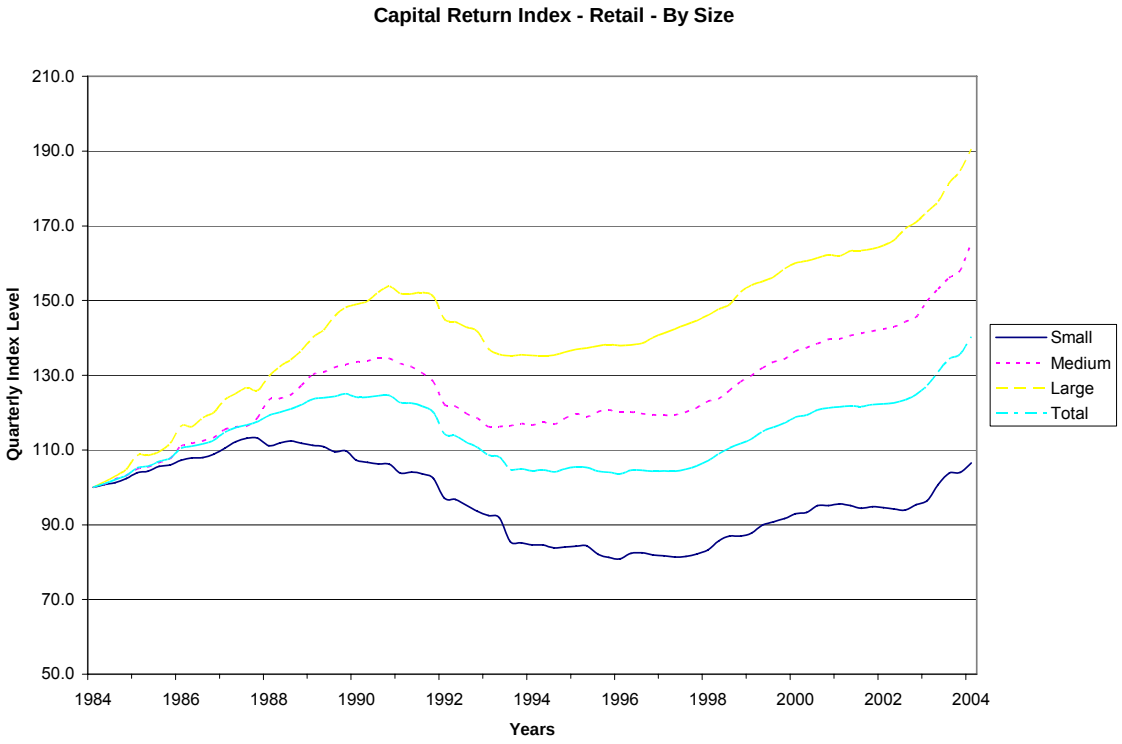

Figure 16

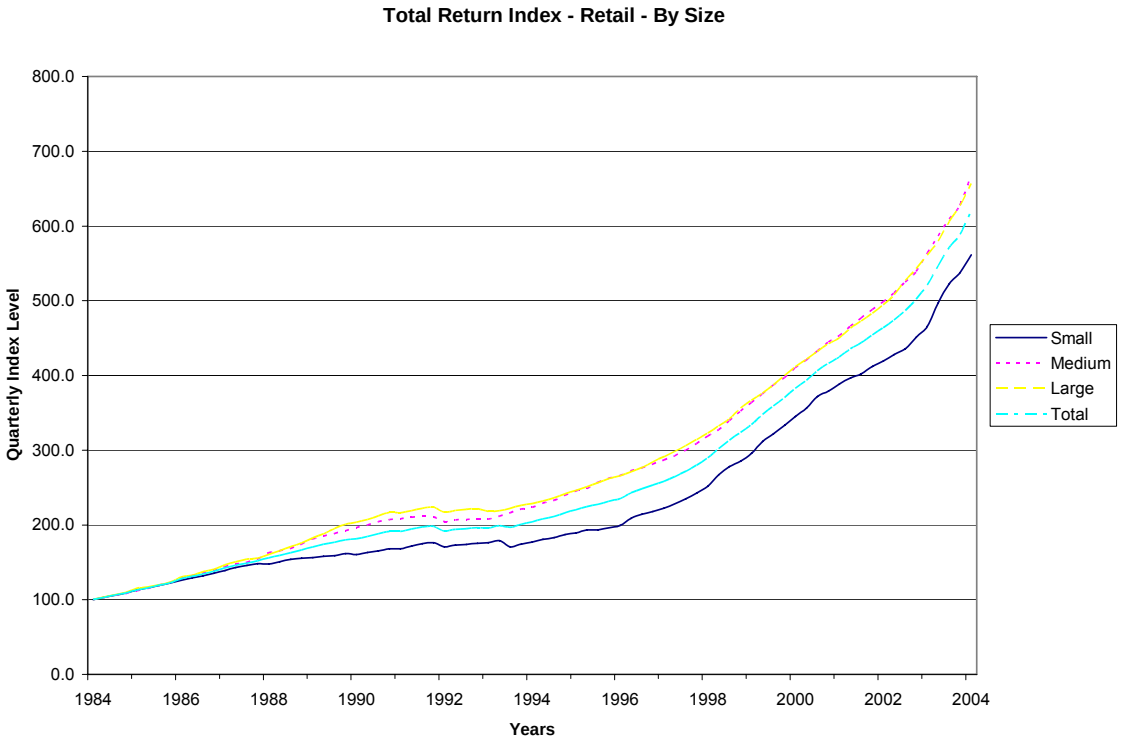

Figure 17

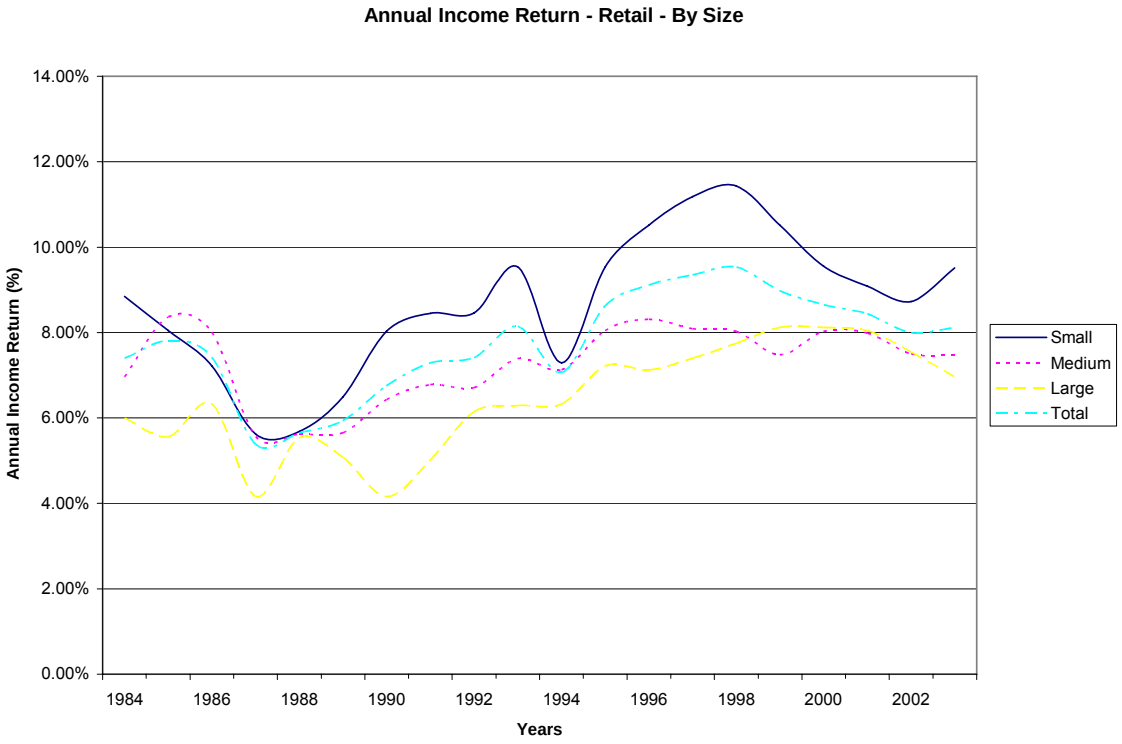

Figure 18

The Tier Selection

The Tier portfolios were created based on the total investment value of the NCREIF index in a particular CBSA. The term "Core Based Statistical Area" (CBSA) as defined by the US Census Bureau became effective in 2000 and refers collectively to metropolitan and micropolitan statistical areas. This study is based upon the CBSA[9] classification for each property in 2003 Q4. Certain CBSAs have been consolidated to represent the primary CBSA (refer Appendix Table 5). For example Cambridge, Essex County, Rockingham County are combined with Boston and represented by the Boston CBSA in this study.

All the CBSAs were ranked in order of the total NCREIF investment value in the particular property type. The rank distribution into Tiers was required to optimize several considerations such as reflecting large jumps in total investment value, represent NCREIF concentrations and

[9] For further details on CBSA classification refer www.census.gov

ensure sufficient properties in all Tiers (especially Tier III) that would provide an accurate representation of returns during the entire analysis period.

The somewhat arbitrary methodology applied to the grouping was to include all ranks in Tier I until the cumulative number of properties in those ranks was around half[10] the total number of properties of that property type in the NCREIF database. Tier II included the next ranking CBSAs until the cumulative number of properties (in Tier II) represented approximately half those remaining (one quarter of the total). The remaining ranks were classified as Tier III CBSAs. This grouping was adjusted one or two positions up or down depending if there was a substantial fall in total investment value in any CBSA near the break point as this represented a clearer Tier break point.

The rankings were calculated in 2003 Q4 and fixed for the entire historic period. This prevented CBSAs from moving Tiers and reflected the investment in a Tier over the entire time horizon.

As the rankings would differ by property type, each property type was analyzed separately and ranked in 2003 Q4. As in the Size category described earlier, a total of six categories i.e. Apartments, Office Suburban, Office CBD, Warehouse, Flex and R&D, Retail (excluding regional and super regional malls), were created.

Due to the limitation of the MS Access query function, for a CBSA to be included in the analysis there has to be at least one property in that CBSA in 2003 Q4. That is, if there is a property that has been transacted in a particular CBSA before 2003 Q4 that does not have even one property in 2003 Q4 then that CBSA will not be part of the analysis and the performance of that property will not be reflected in the Tiers. This would in some way skew the data in Tier III as some CBSAs in Tier III will not be part of the analysis. However this has proved to occur rarely and has not influenced the performance of the Tiers significantly.

An example of the Retail property type distribution has been provided below:

[10] This represented the 'over-weighting'

Retail

Tier	No. of Properties	MSA Rankings
I	231	1 to 12
II	123	13 to 35
III	108	36 to 107
Total	462 properties	107 MSA's

The detailed Tier break up for each property type as well as the CBSA listing for each of these Tiers has been provided in the Appendix (refer Appendix Table 6 to 11).

The performance of the Tier portfolios has been provided in a chart form (refer Figures 19 to 36) and the data has been provided in a numeric form in the Appendix (refer Appendix Table 18 to 23).

Charts – Tier Portfolios by Property Type

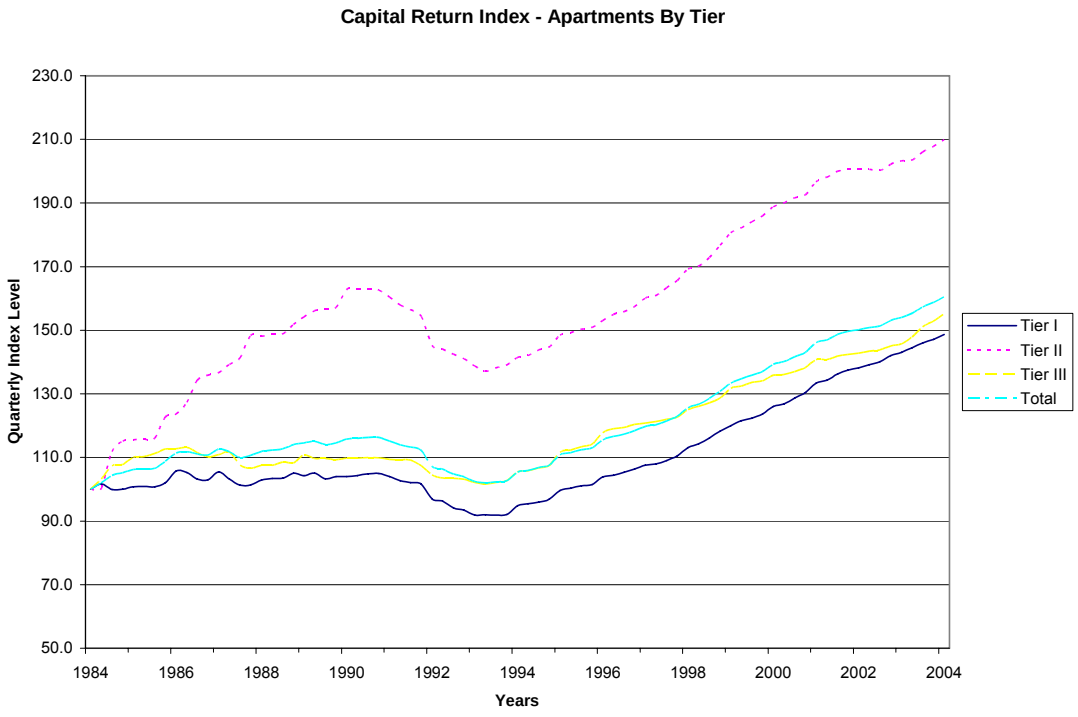

Figure 19

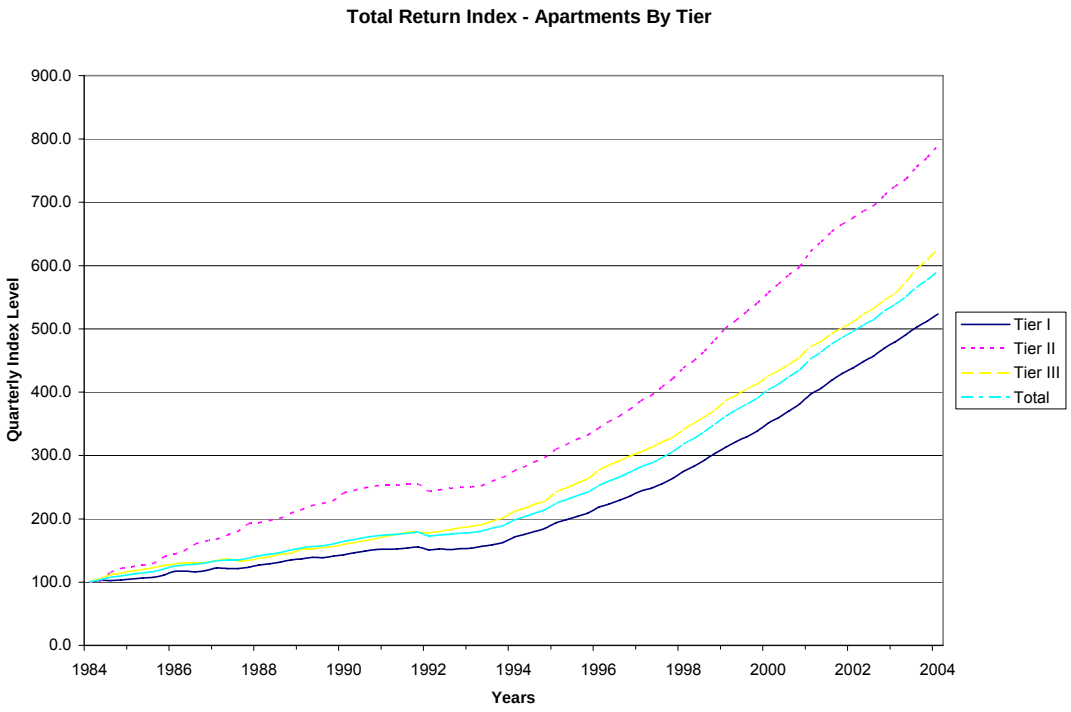

Figure 20

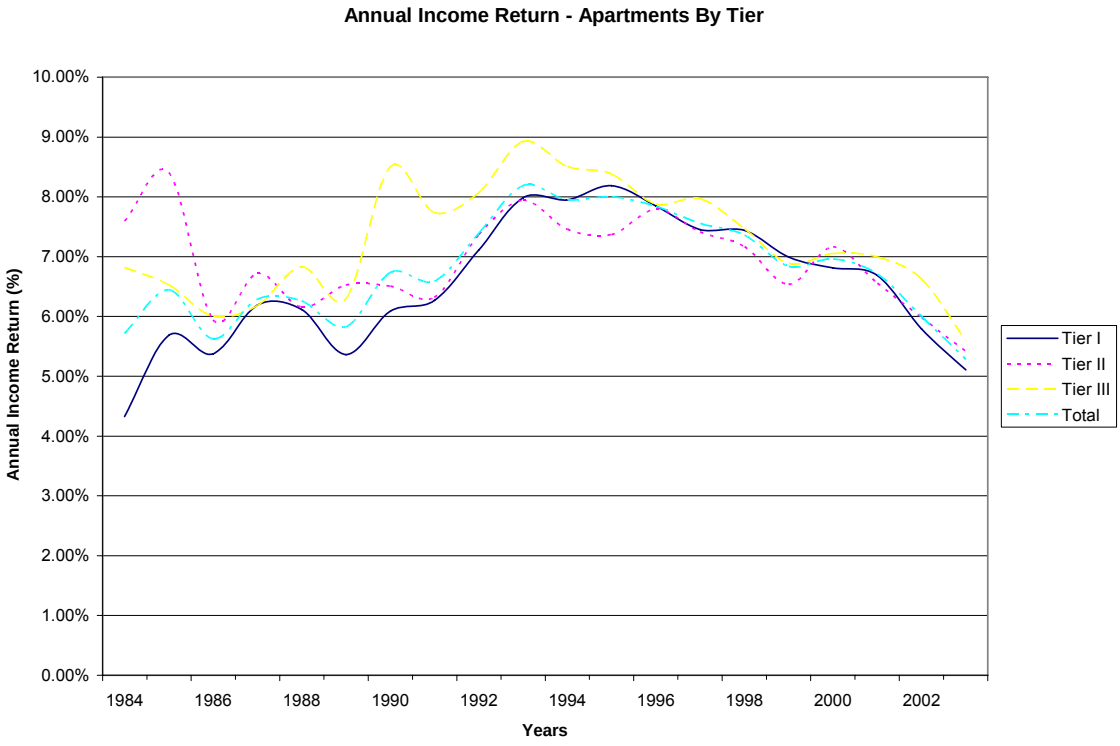

Figure 21

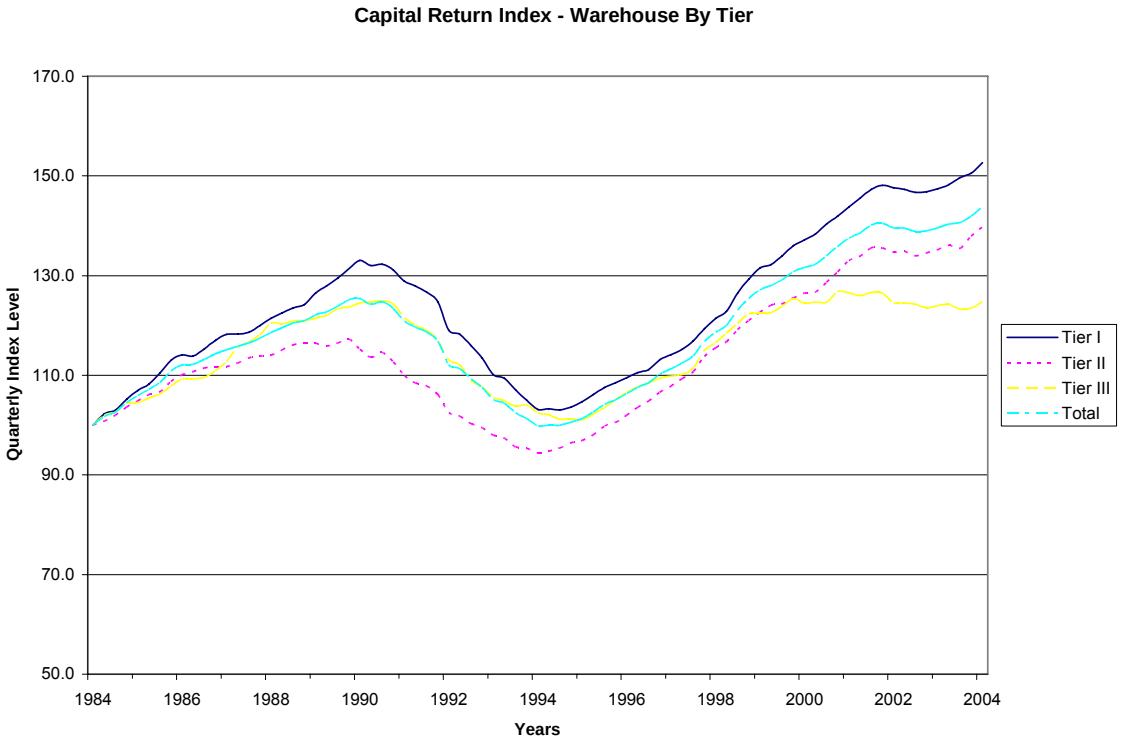

Figure 22

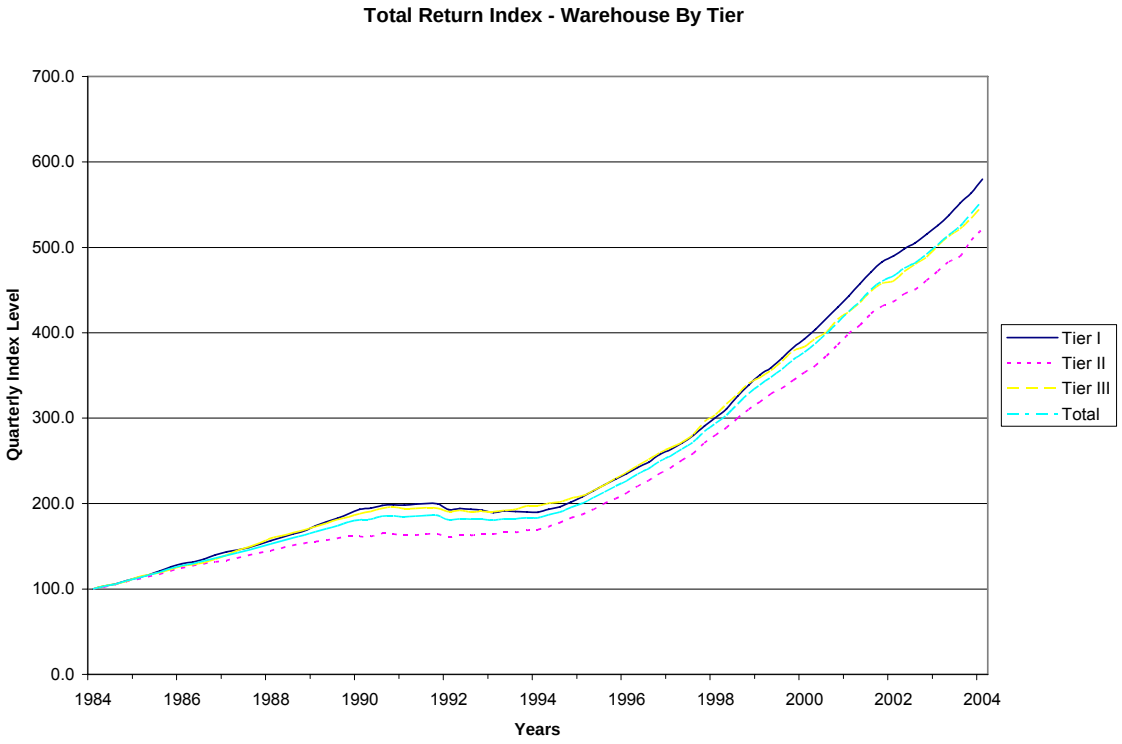

Figure 23

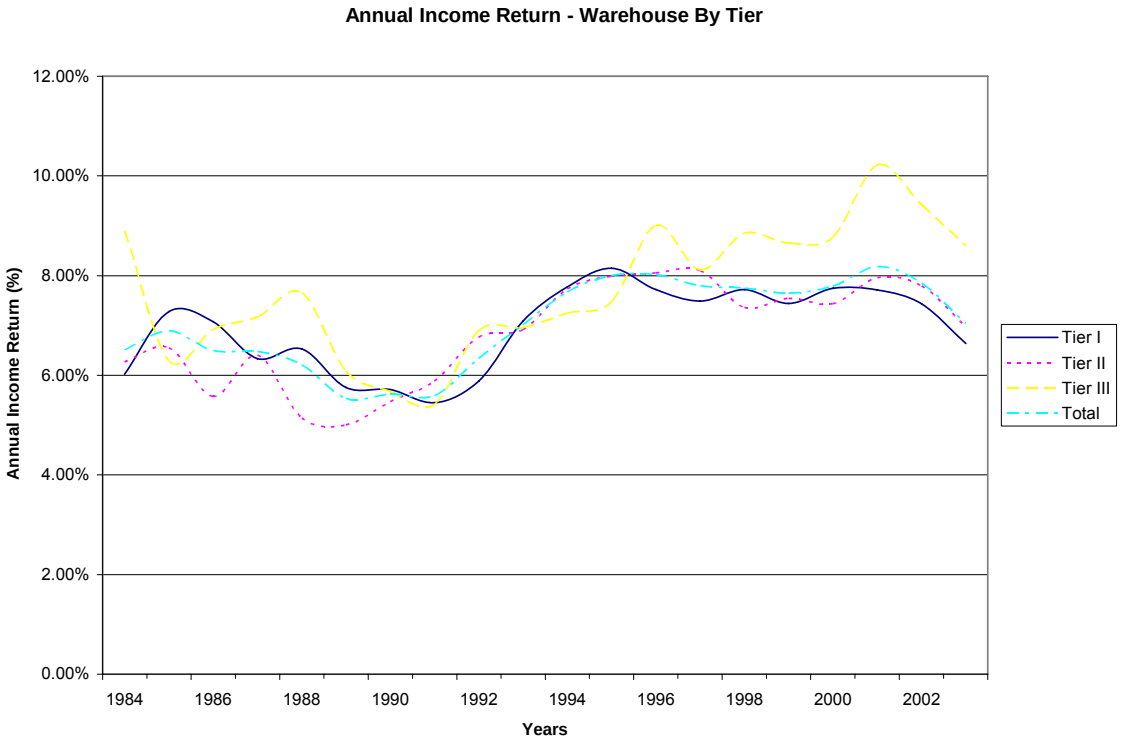

Figure 24

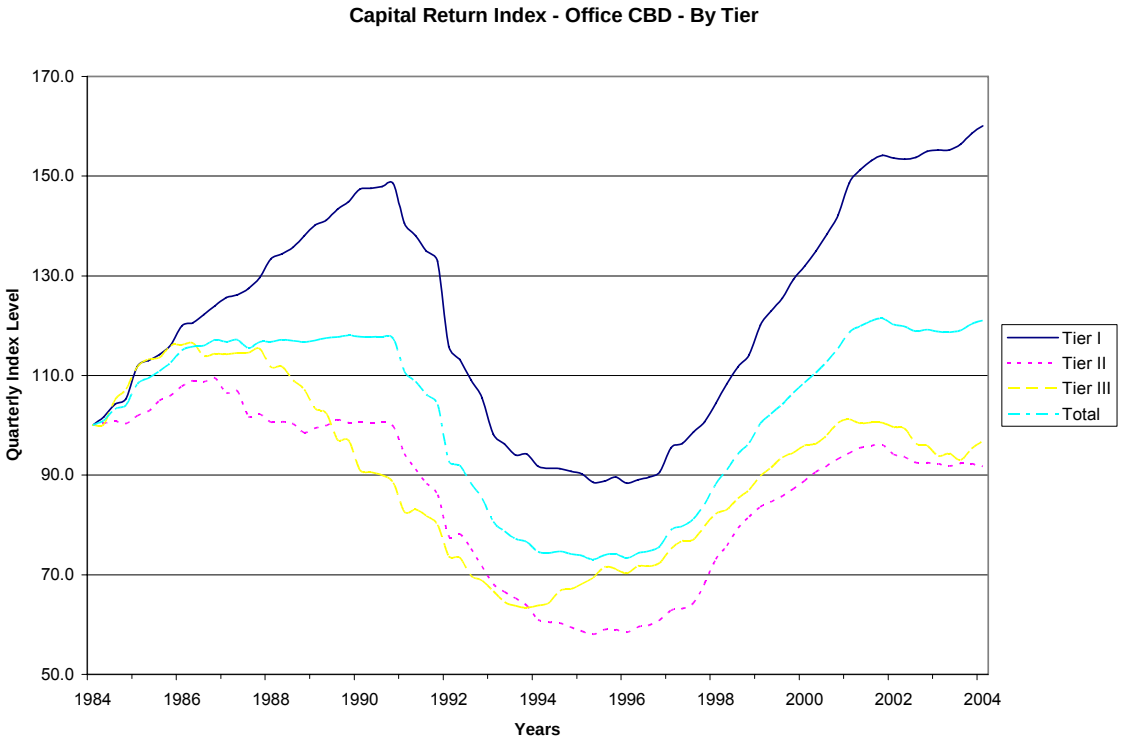

Figure 25

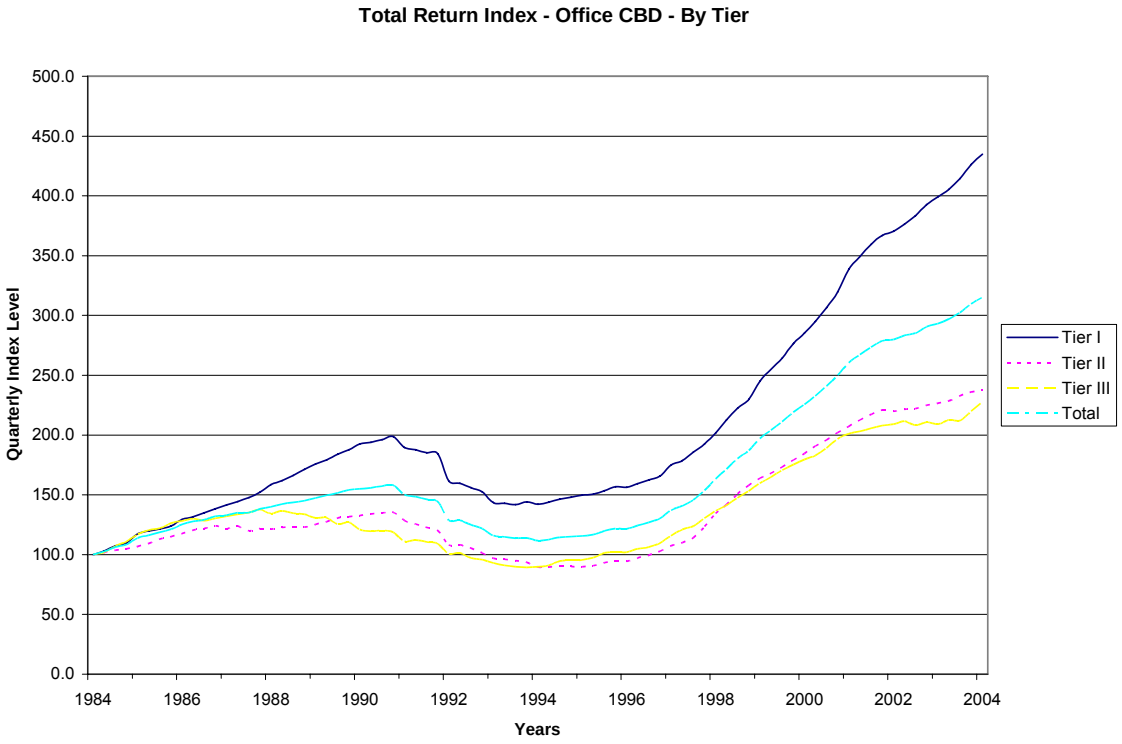

Figure 26

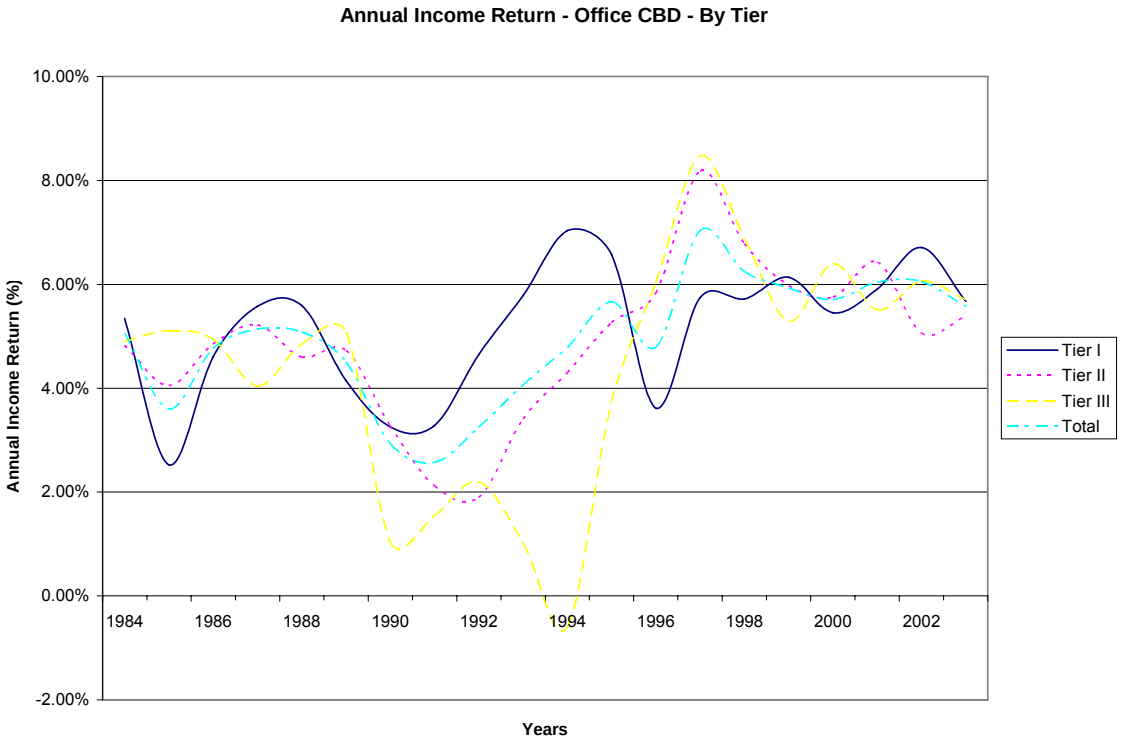

Figure 27

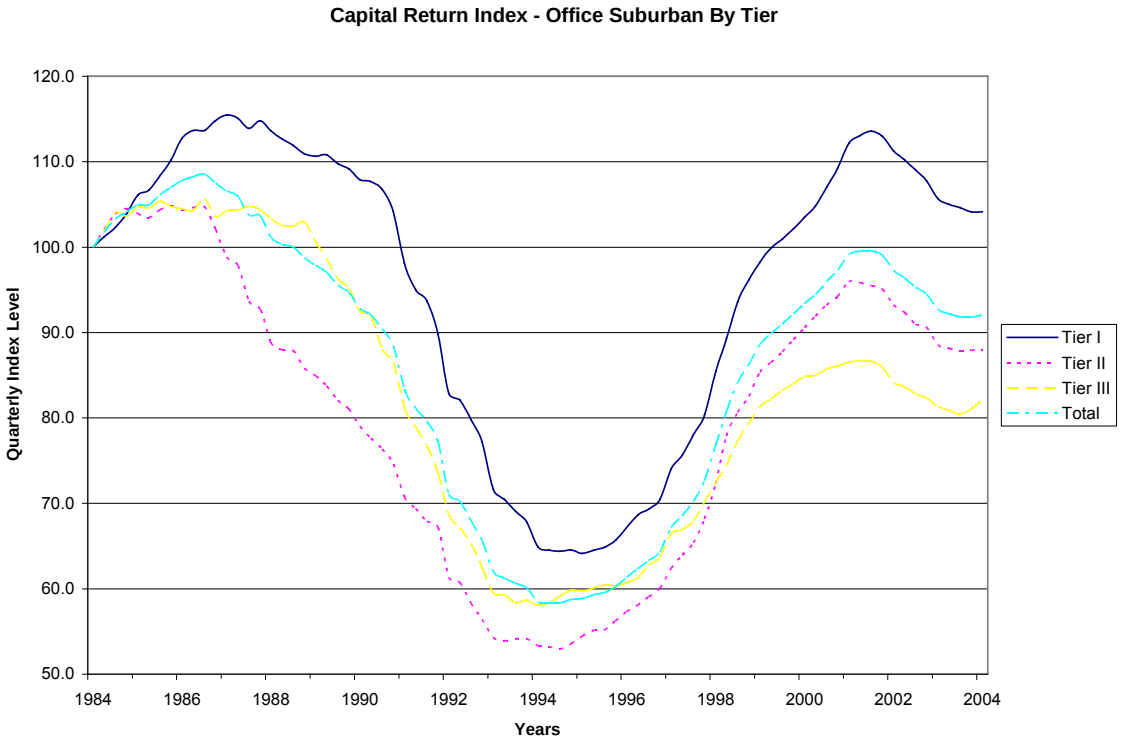

Figure 28

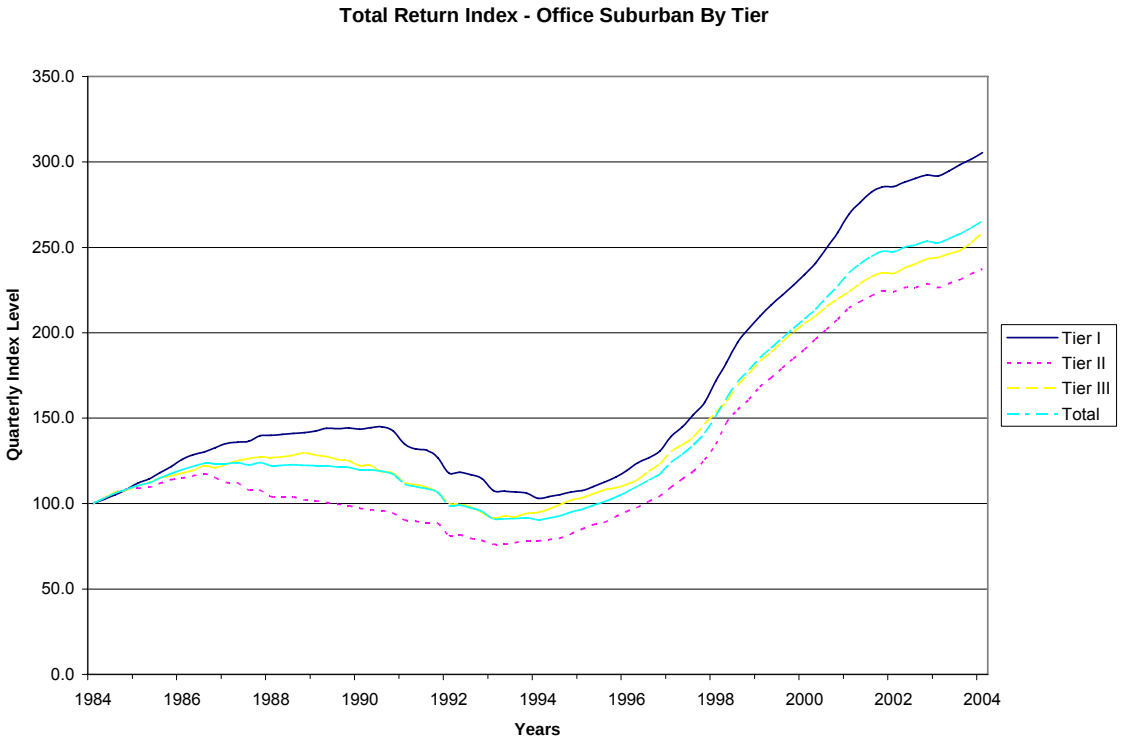

Figure 29

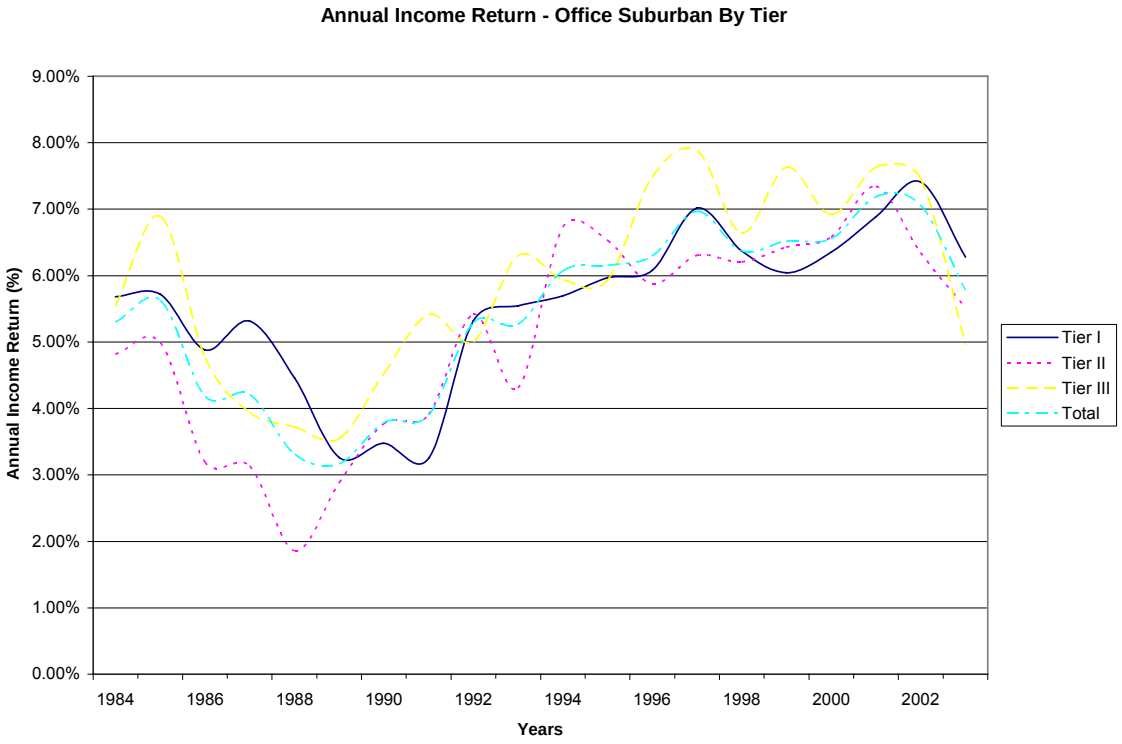

Figure 30

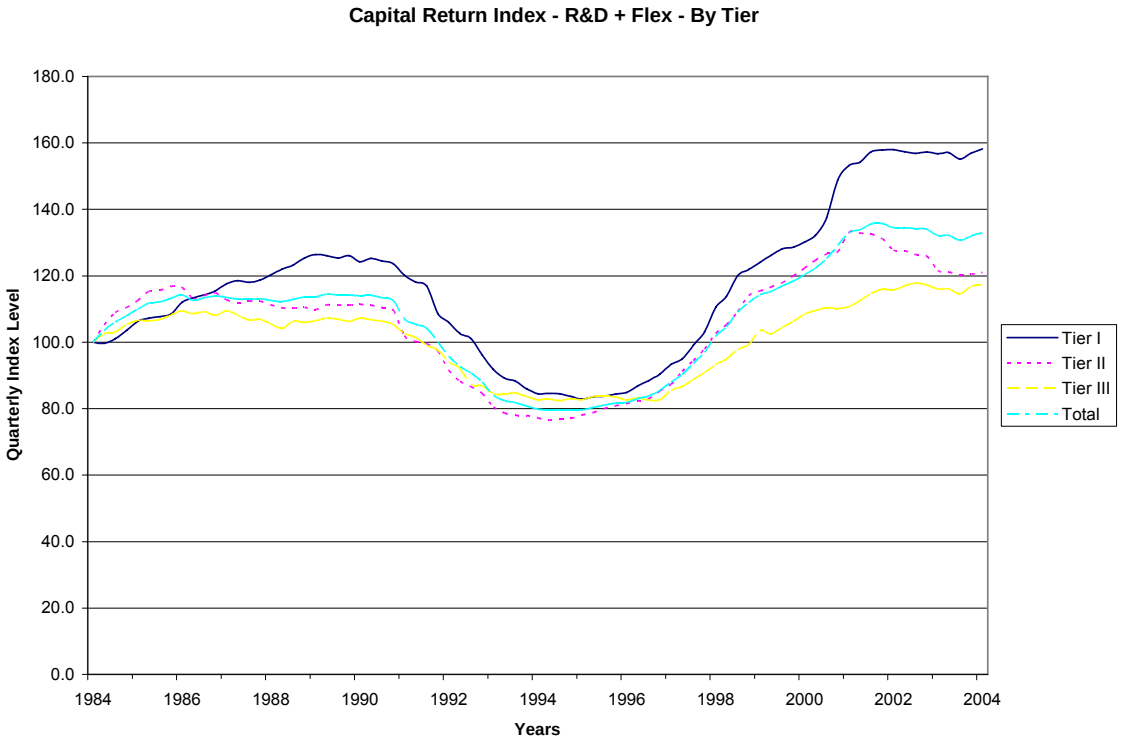

Figure 31

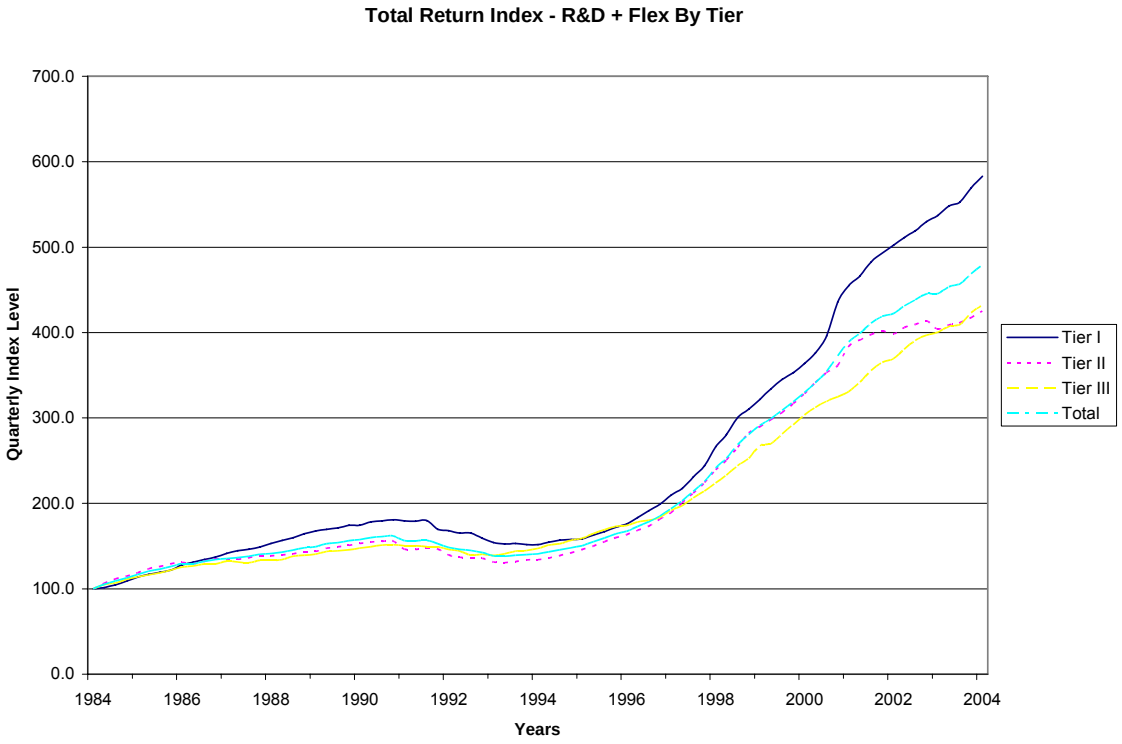

Figure 32

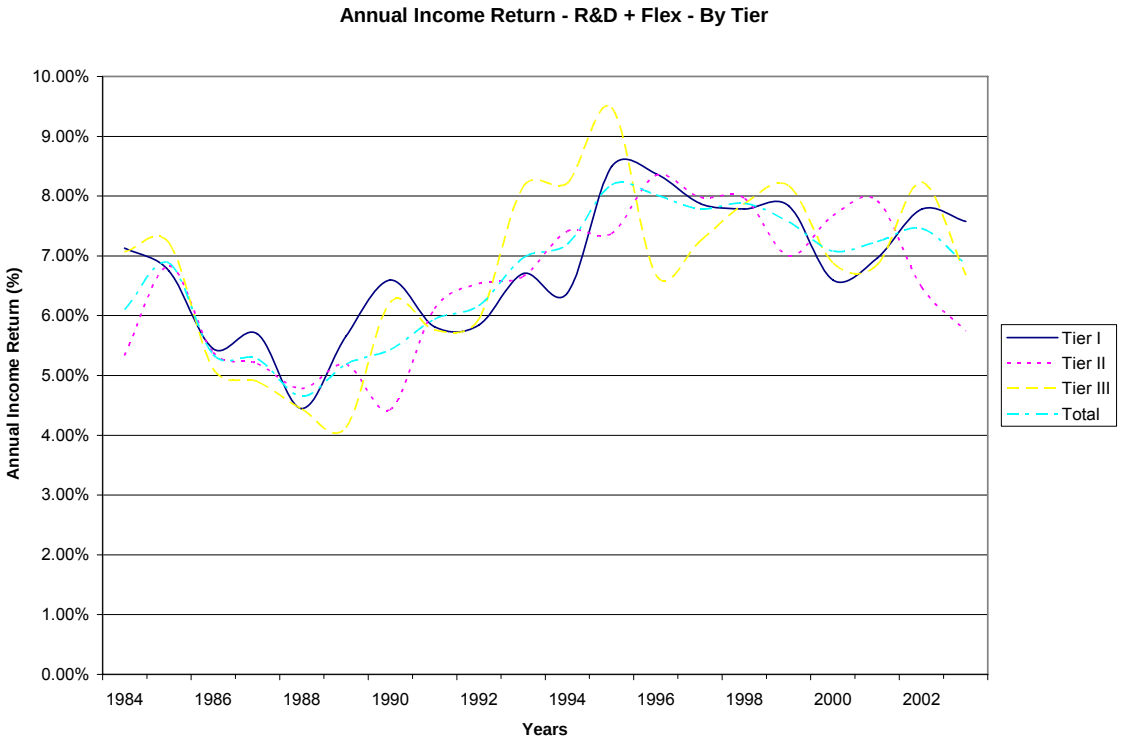

Figure 33

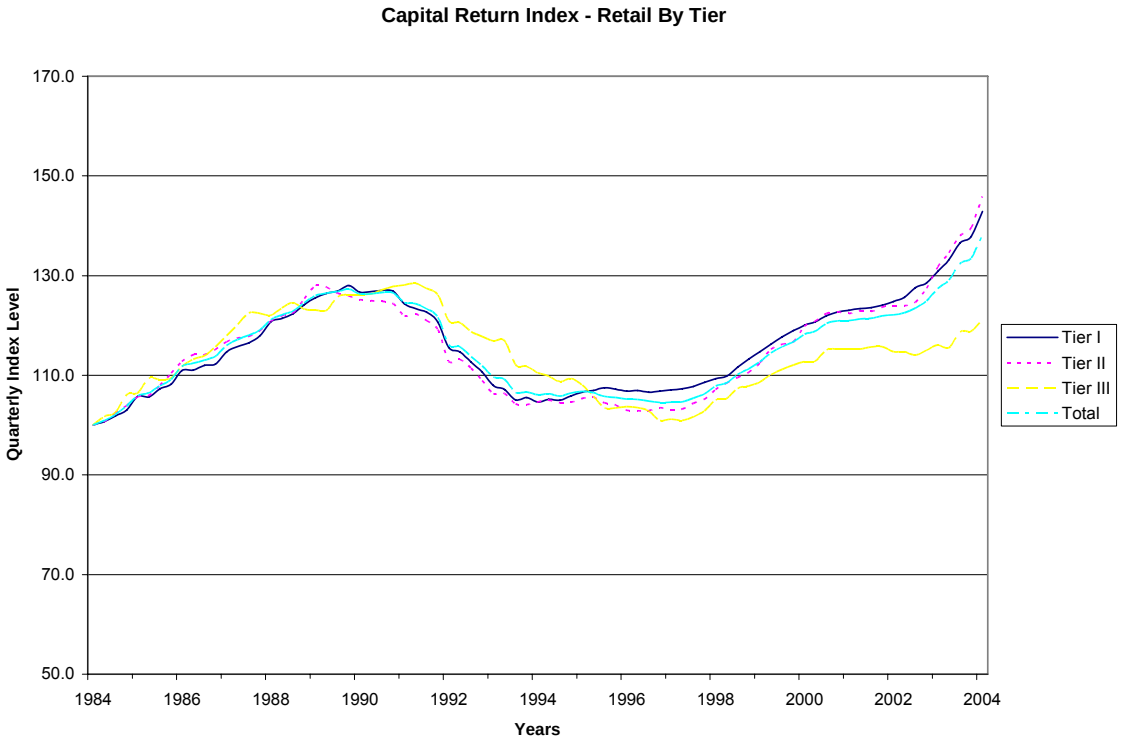

Figure 34

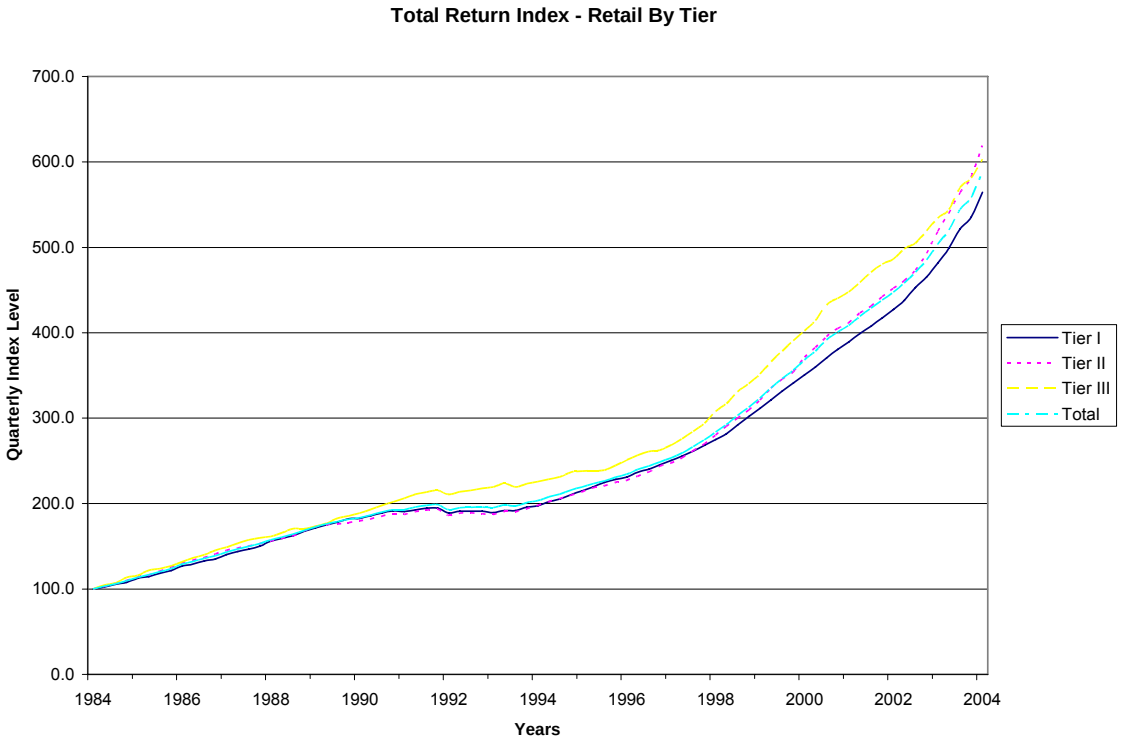

Figure 35

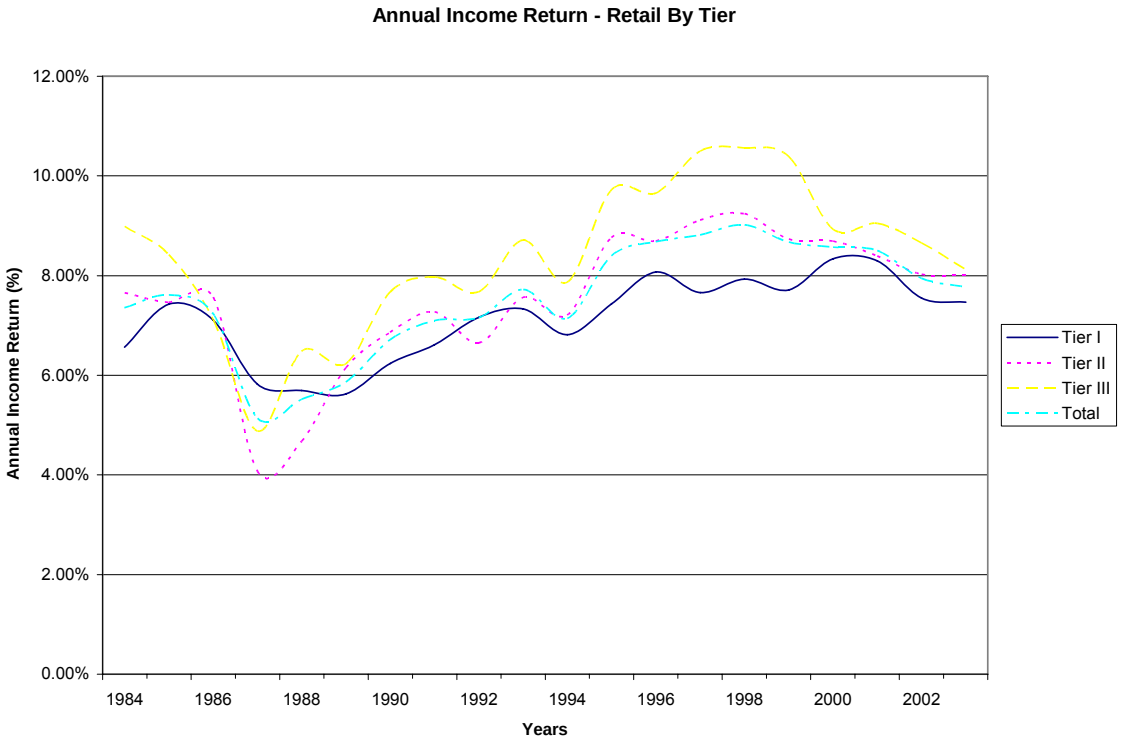

Figure 36

Detailed Methodology Part II – Asset Pricing Models

As we observed earlier the returns of the portfolios created in Part I have limited use to a portfolio investment manager without a measure of risk associated with these portfolios. In this part I will describe the methodology used to create various equilibrium asset pricing models that I have developed to understand the risks and factors that the market recognizes to price real estate.

The Single Factor Capital Asset Pricing Model

This involved running several regressions in a two stage process as follows:

1. Time Series Regression: This regression was run for all portfolios to estimate the Beta of the portfolio relative to the aggregate of all NCREIF properties.

The U.S. 30 Day Government Treasury Bill total return was used as a proxy for the risk free rate used to calculate the risk premiums in this study.

The beta for the portfolios was defined with respect to the performance of the aggregate of all NCREIF properties rather than with respect to the National Wealth Portfolio (NWP). This simplification avoids appraisal bias, and is consistent with classical CAPM theory under the assumption that the national wealth-based betas of property portfolios equals their betas with respect to NCREIF times the beta of the aggregate NCREIF portfolio with respect to national wealth.

Regression:

$$R_{i,t} - R_{f,t} = \alpha_{i,t} + \beta_{i,t} (R_{m,t} - R_{f,t}) + \varepsilon_{i,t}$$

Where:

- Ri,t is the Total Return of the portfolio at time t.
- Rf,t is the Risk Free Rate at time t.
- Rm,t is the Total Return of the aggregate of NCREIF properties at time t.

2. Cross Sectional Regression: This regression was run using the β_i estimates from the first stage regression along with their respective average risk premiums [Avg(Ri-Rf)].

Regression:

$$Avg(R_i - R_f) = \gamma_0 + \gamma_1 \beta_i + \varepsilon_i$$

Where:

- Ri is the average Total Return of the portfolio.

- Rf is the average Risk Free Rate
- β_i is the Beta of the portfolio estimated from the earlier time series regression.

The cross sectional regressions where run separately over the Tier set of portfolios and the Size set of portfolios with 18 data points each. This was done to prevent duplication of properties in the cross sectional regressions. Thus I got two separate cross sectional regression results.

The Multi Factor Equilibrium Asset Pricing Model

Similar to the single factor model this involved running a series of regressions in a two stage process. However these regressions involved *additional factors* as described below:

The Size Factor**:** This represented the size (value) effect and was calculated as total return on large properties minus the total return on small properties. This factor was derived from the portfolios already created as below:

$$R_{LMS,t} = 1/6(R_{Apt\ L,t} + R_{Ret\ L,t} + R_{CBD\ L,t} + R_{Sub\ L,t} + R_{Whr\ L,t} + R_{R\&D\ L,t}) - 1/6(R_{Apt\ S,t} + R_{Ret\ S,t} + R_{CBD\ S,t} + R_{Sub\ S,t} + R_{Whr\ S,t} + R_{R\&D\ S,t})$$

The Tier Factor**:** This represented the Tier effect and was calculated as total return on Tier I properties minus total return on Tier III properties. This factor was also derived from the already created portfolios as below:

$$R_{IMIII,t} = 1/6(R_{Apt\ I,t} + R_{Ret\ I,t} + R_{CBD\ I,t} + R_{Sub\ I,t} + R_{Whr\ I,t} + R_{R\&D\ I,t}) - 1/6(R_{Apt\ III,t} + R_{Ret\ III,t} + R_{CBD\ III,t} + R_{Sub\ III,t} + R_{Whr\ III,t} + R_{R\&D\ III,t})$$

The Income Factor**:** This represented the income effect and introduced the possible market preference for a high income component of total return. This factor was created by generating separate high income and low income portfolios and calculated as total return of low income return properties minus total return of high income return properties.

$R_{LMH,t} = R_{L,t} - R_{H,t}$

Although I did run this four factor model, the Income Factor proved to be insignificant and thus I have only described the three factor model which excluded the Income Factor.

1. Time Series Regression: This regression was run for all portfolios to estimate the Beta of the portfolio relative to the aggregate of all NCREIF properties as well as to estimate the Factor Betas.

Regression:

$$R_{i,t} - R_{f,t} = \alpha_{i,t} + \beta_{Mi,t}(R_{m,t} - R_{f,t}) + \beta_{IMIIIi,t}(R_{IMIII,t}) + \beta_{LMSi,t}(R_{LMS,t}) + \varepsilon_{i,t}$$

Where:

- $R_{i,t}$ is the Total Return of the portfolio at time t.
- $R_{f,t}$ is the Risk Free Rate at time t.
- $R_{m,t}$ is the Total Return of the aggregate of NCREIF properties at time t.
- $R_{IMIII,t}$ is the Total Return of Tier I properties at time t minus Total Return of Tier III properties at time t.
- $R_{LMS,t}$ is the Total Return of Large properties at time t minus Total Return of Small properties at time t.

2. Cross Sectional Regression: This regression was run using the $\beta_{Mi,t}$, $\beta_{IMIIIi,t}$, $\beta_{LMSi,t}$ estimates from the first stage regression, dummy variables for property type along with their respective average risk premiums [Avg(Ri-Rf)]

Regression:

$$Avg(R_i - R_f) = \gamma_0 + \gamma_1 \beta_{Mi} + \gamma_2 \beta_{IMIIIi} + \gamma_3 \beta_{LMSi} + \gamma_4 Apt_i + \gamma_5 Sub_i + \gamma_6 Whr_i + \gamma_7 R\&D_i + \gamma_8 Ret_i + \varepsilon_i$$

Where:

- Ri is the average Total Return of the portfolio.
- Rf is the average Risk Free Rate
- β_{Mi} is the Market Beta of the portfolio estimated from the earlier time series regression.
- β_{IMIIIi} is the Tier Beta of the portfolio estimated from the earlier regression.
- β_{LMSi} is the Size Beta of the portfolio estimated from the earlier regression.
- Apt_i is 1 if the portfolio represents Apartments 0 otherwise.
- Sub_i is 1 if the portfolio represents Suburban Office properties 0 otherwise.
- Whr_i is 1 if the portfolio represents Industrial Warehouse 0 otherwise.
- $R\&D_i$ is 1 if the portfolio represents R&D plus Flex properties 0 otherwise.
- Ret_i is 1 if the portfolio represents Retail properties 0 otherwise.

As property types are dummy variables, Office CBD will represent the base case.

Sample regression line

	Dependent		Independent							
	Risk Premium		BetaNcreif	BetaTier	BetaSize	**Apt**	**Sub**	**Whr**	**R&D**	**Ret**
CBD I	2.75%		1.57	0.31	1.09	0	0	0	0	0

As in the single factor model the cross sectional regressions where run separately over the Tier set of portfolios and the Size set of portfolios with 18 data points each.

Analysis & Findings

I tested several equilibrium asset pricing models and have presented in detail the two models that prove to be most relevant and/or significant. All the models tested have been briefly described below:

1. Single Factor CAPM: This has been described in detail in Chapter 2.
2. Three Factor Model: The three factors, were the Market[11], Size and Tier factors. This model had significant coefficients for all the factors, but proved to have a low adjusted R square.
3. Three Factor Model with Property Type Dummies: This has been described on detail in Chapter 2. This introduced the property type as a factor in the initial three factor model. All the factors proved to be significant except for the Market factor. This model also had the highest adjusted R square and is the model selected by this paper. I have described the findings of this model in the later part of this chapter.
4. Four Factor Model: This included the income factor described earlier as the fourth factor. However the income factor proved to be insignificant, the model had a reduced adjusted R square and was subsequently rejected.
5. Four Factor Model with Property Type Dummies: This model introduced the property type dummies in the four factor model described above. The income factor remained insignificant and the adjusted R square although high, was less then the similar three factor model (Model 3). This model was subsequently rejected as it presented no new information and/or accuracy.

The findings of the single factor model and the three factor model proved to be very interesting. I have described the findings for these two models in detail below:

[11] Market refers to the NCREIF collection of properties

The Single Factor Capital Asset Pricing Model

A) The results of the time series regression proved to be very interesting. I have plotted the results of the portfolio Market Beta with the average return of that portfolio to get an early image of the risk / return profile of the portfolios. I have also created 'clouds' around the portfolios representing the factors. This was done to check if the factors tend to aggregate in a particular area of the risk / return spectrum (i.e. does the market systematically price these factors?)

The charts have been presented below (Figures 37 to 40)

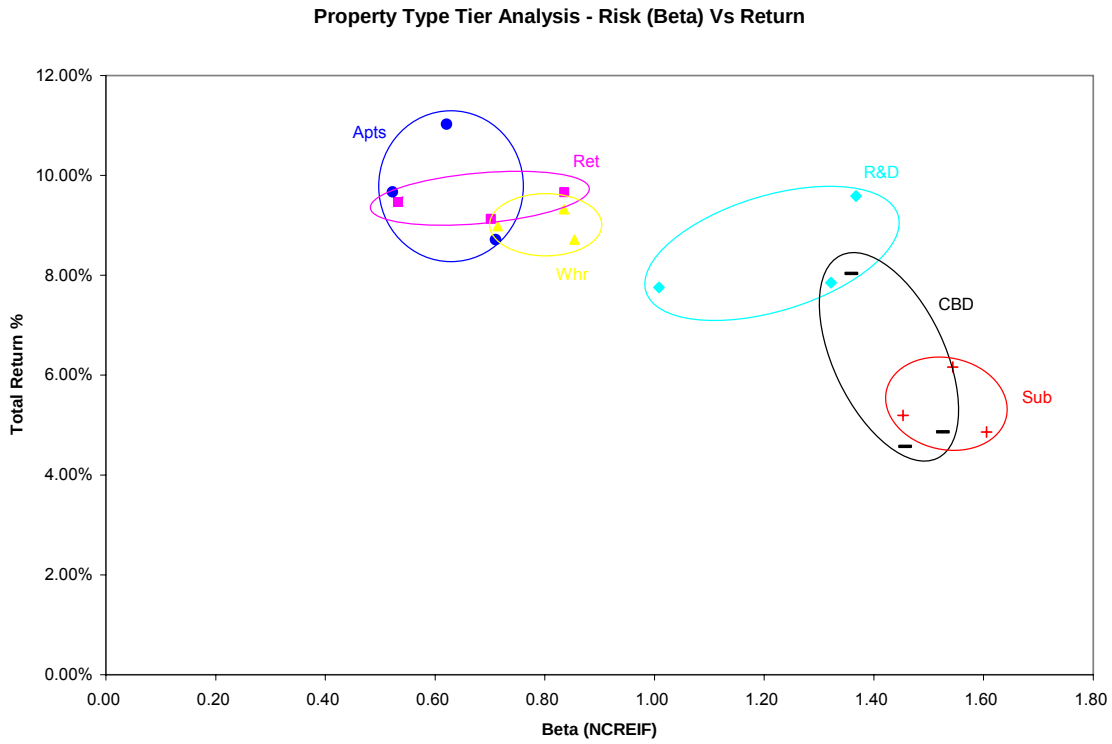

Figure 37

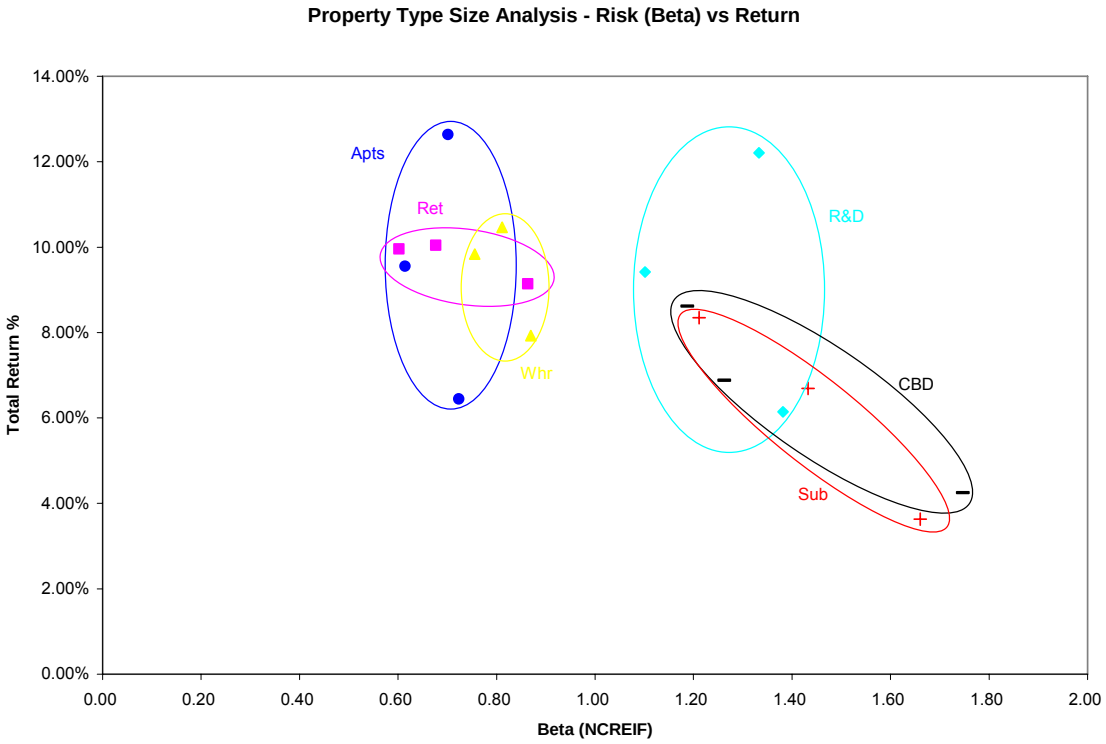

Figure 38

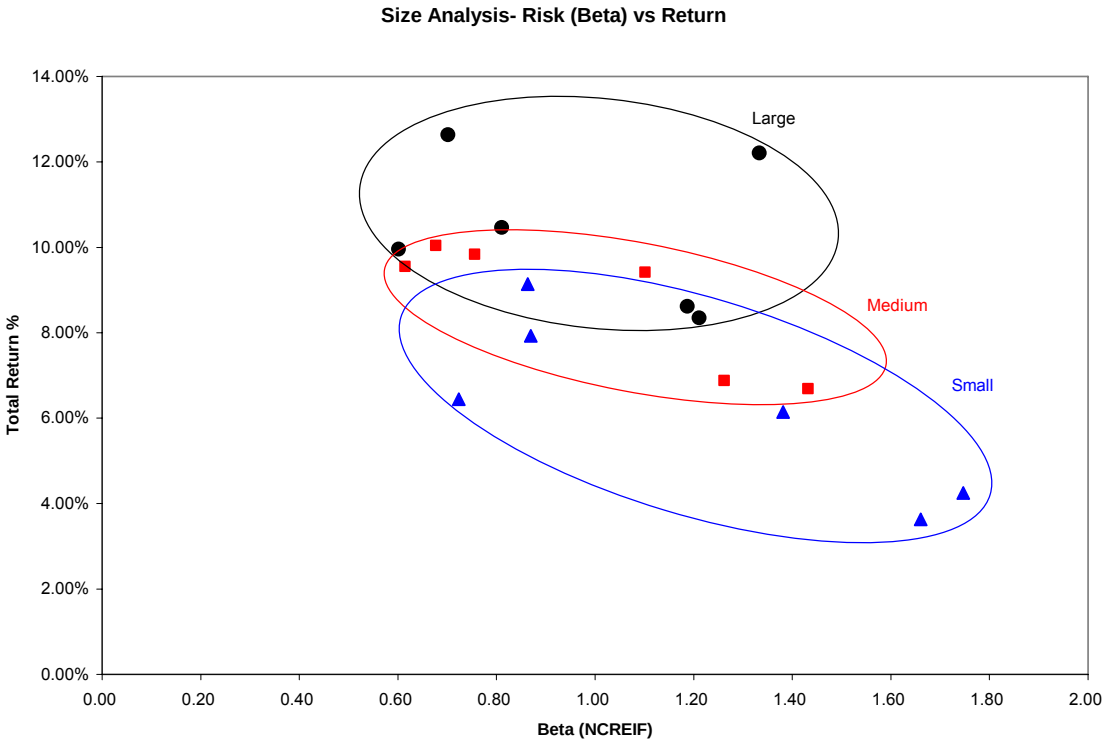

Figure 39

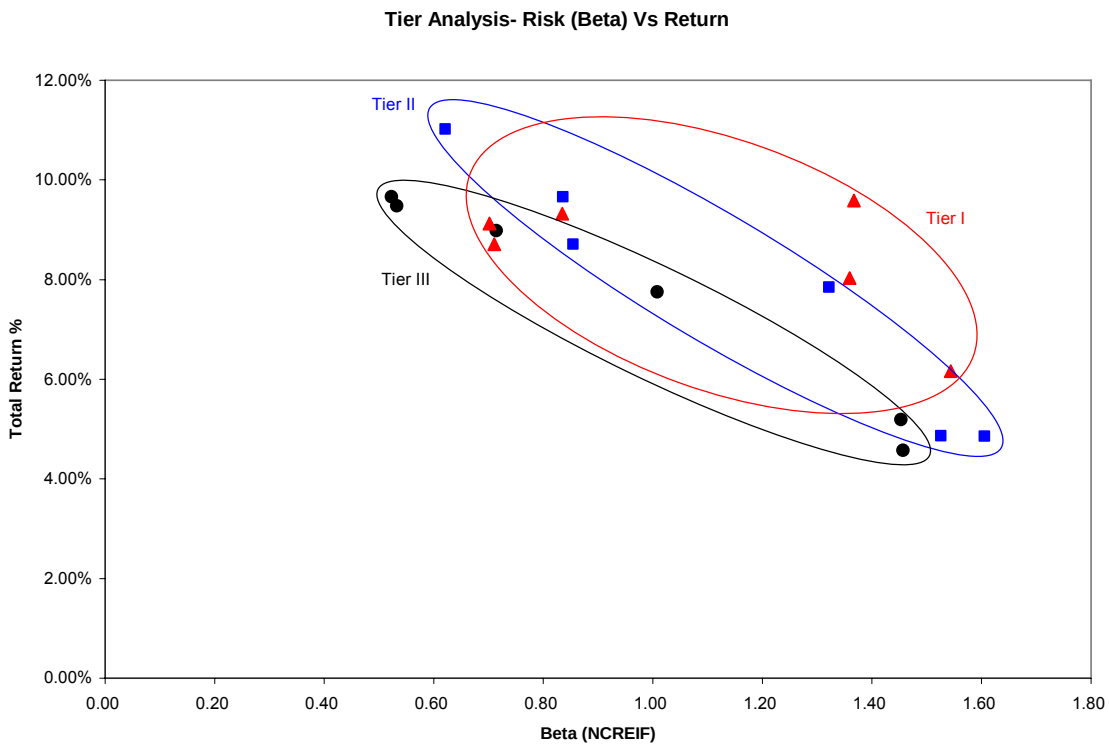

Figure 40

The first interesting finding is that the portfolios with a *higher* Market Beta have *lower* historic total returns (which are a proxy for expected returns). This seems counter intuitive to the CAPM theory.

The other interesting finding is the clear aggregation of the portfolios by property type (refer Figure 37 & 38), implying that this factor is systematically priced by the market. This was later confirmed in the multi factor model described earlier.

The Size factor also presented some aggregation (refer Figure 39) although less distinct as that of the property type factor. From the aggregation it seems that the market requires a premium for investing in larger value properties and a discount for investing in smaller value properties.

The Tier factor did not have a clear aggregation (refer Figure 40).

B) As described earlier the model consisted of running the cross sectional regression twice i.e. over the Size and Tier portfolios, so as to avoid duplication of portfolios. Both the regression results have been presented below (Tables 1 & 2).

Regression Analysis **CAPM Cross Sectional - Tier Analysis**

r^2	0.679	n	18
r	-0.824	k	1
Std. Error	0.012	Dep. Var.	**Risk Premium**

ANOVA table

Source	*SS*	*df*	*MS*	*F*	*p-value*
Regression	0.0046	1	0.0046	33.92	2.59E-05
Residual	0.0022	16	0.0001		
Total	0.0067	17			

Regression output *confidence interval*

variables	*coefficients*	*std. error*	*t (df=16)*	*p-value*	*95% lower*	*95% upper*
Intercept	0.0712	0.0081	8.817	1.54E-07	0.0541	0.0883
CoBeta	-0.0420	0.0072	-5.824	2.59E-05	-0.0573	-0.0267

Table 1

Regression Analysis **CAPM Cross Sectional - Size Analysis**

r^2	0.438	n	18
r	-0.662	k	1
Std. Error	0.019	Dep. Var.	**Y**

ANOVA table

Source	*SS*	*df*	*MS*	*F*	*p-value*
Regression	0.0044	1	0.0044	12.46	.0028
Residual	0.0057	16	0.0004		
Total	0.0101	17			

Regression output					*confidence interval*	
variables	*coefficients*	*std. error*	*t (df=16)*	*p-value*	*95% lower*	*95% upper*
Intercept	0.0784	0.0139	5.625	3.80E-05	0.0488	0.1079
CoBeta	-0.0443	0.0125	-3.530	.0028	-0.0709	-0.0177

Table 2

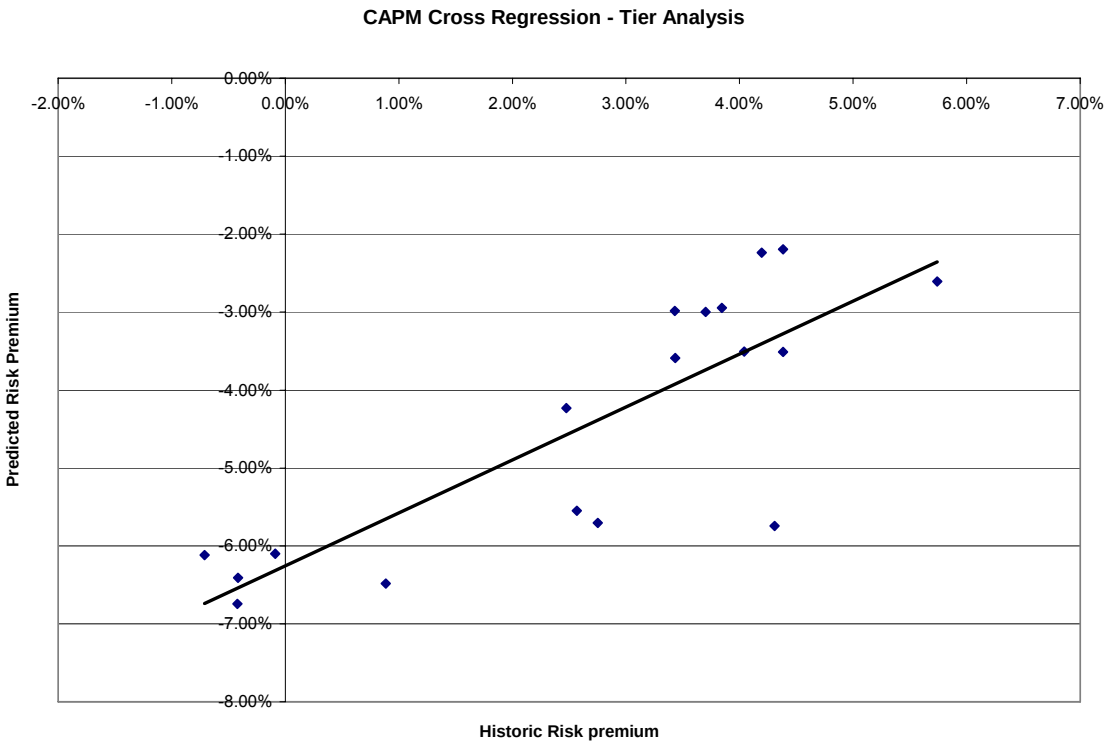

Figure 41

As can be seen from the above regression results (refer Table 1 & 2), the single factor CAPM model does not prove to be a robust model for pricing risk in real estate investments. It has a significant intercept and a low R square and actually provides a negative Beta to the market implying that the market requires a *lower* risk premium for portfolios with a higher Market Beta as compared to portfolios with a lower Market Beta. This does not make intuitive sense and leads into my second risk model in which I try and capture other factors that the market prices as if they were risk.

Three Factor Fama & French Based Asset Pricing Model with Property Type

This model proved to be a very robust asset pricing model with a high R square and a near zero and insignificant intercept.

Regression Analysis **3 Factor FF + Dummy - Tier**

R^2	0.951		
Adjusted R^2	0.908	n	18
R	0.975	k	8
Std. Error	0.006	Dep. Var.	**Risk Premium**

ANOVA table

Source	*SS*	*df*	*MS*	*F*	*p-value*
Regression	0.0064	8	0.0008	21.85	.0001
Residual	0.0003	9	0.0000		
Total	0.0067	17			

Regression output

					confidence interval	
variables	*coefficients*	*std. error*	*t (df=9)*	*p-value*	*95% lower*	*95% upper*
Intercept	0.0028	0.0229	0.121	.9066	-0.0491	0.0547
CoBetaNcreif	-0.0041	0.0156	-0.263	.7981	-0.0395	0.0312
CoBetaTier	0.0073	0.0029	2.538	.0318	0.0008	0.0139
CoBetaSize	0.0179	0.0047	3.817	.0041	0.0073	0.0285
BetaApt	0.0486	0.0138	3.525	.0065	0.0174	0.0798
BetaSub	0.0092	0.0057	1.615	.1408	-0.0037	0.0221
BetaWhr	0.0344	0.0114	3.012	.0147	0.0086	0.0603
BetaR&D	0.0306	0.0061	5.000	.0007	0.0168	0.0445
BetaRet	0.0405	0.0128	3.164	.0115	0.0116	0.0695

Table 3

Regression Analysis **3 Factor FF + Dummy - Size**

R^2	0.967		
Adjusted R^2	0.938	n	18
R	0.983	k	8
Std. Error	0.006	Dep. Var.	**Y**

ANOVA table

Source	*SS*	*df*	*MS*	*F*	*p-value*
Regression	0.0098	8	0.0012	33.07	8.75E-06
Residual	0.0003	9	0.0000		
Total	0.0101	17			

Regression output					*confidence interval*	
variables	*coefficients*	*std. error*	*t (df=9)*	*p-value*	*95% lower*	*95% upper*
Intercept	0.0292	0.0170	1.720	.1196	-0.0092	0.0677
CoBetaNcreif	-0.0294	0.0109	-2.697	.0245	-0.0541	-0.0047
CoBetaTier	0.0204	0.0046	4.424	.0017	0.0099	0.0308
CoBetaSize	0.0420	0.0033	12.556	5.23E-07	0.0344	0.0495
BetaApt	0.0463	0.0112	4.134	.0025	0.0210	0.0716
BetaSub	0.0249	0.0057	4.414	.0017	0.0122	0.0377
BetaWhr	0.0248	0.0087	2.860	.0188	0.0052	0.0444
BetaR&D	0.0337	0.0054	6.252	.0001	0.0215	0.0459
BetaRet	0.0342	0.0102	3.354	.0085	0.0111	0.0573

Table 4

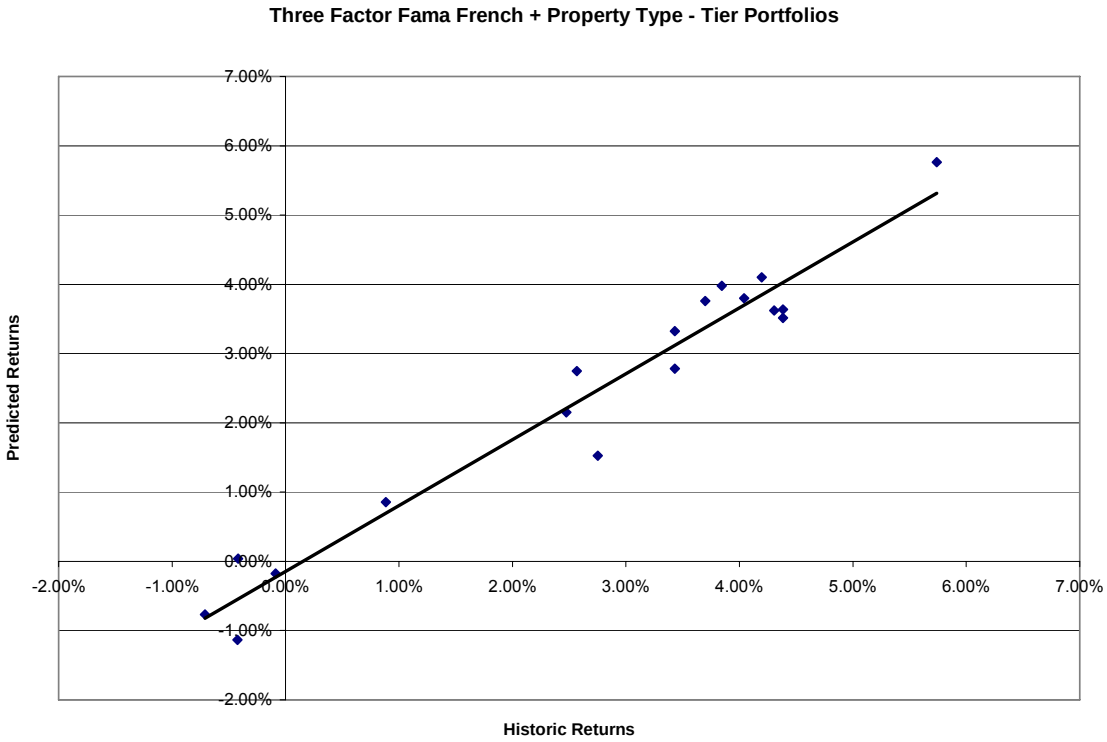

Figure 42

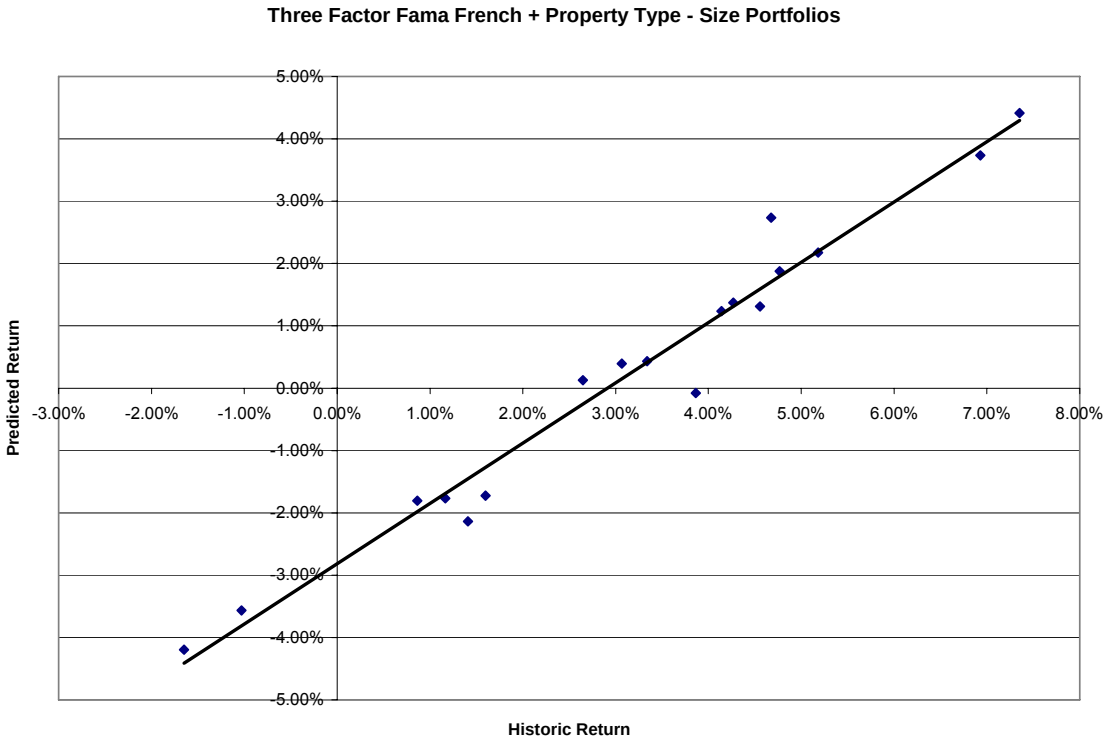

Figure 43

The above model proves to be an accurate asset pricing model (refer Table 3 & 4). It is interesting to observe the coefficients of the factors as they seem often opposite to the Fama & French model within the stock market. An important point to note is that this analysis only includes total returns on the property level. At a *fund level* there may be additional costs such as transaction, operating or management costs that may differ (at the fund level) by property type, size or tier. However on further discussion with fund managers[12], these additional costs were considered insignificant.

The Market factor, the beta with respect to the aggregate NCREIF is found to be insignificant and possibly negative influence on expected return. This is the opposite of what asset pricing theory predicts. It is difficult to ascertain what the possible reasons for this may be. One possible reason could be that the market beta for the portfolios does not stay constant over time and changes randomly and thus it cannot be systematically predicted. As a result it is not priced by

[12] Cate Polleys, John Barry, Real Estate Fidelity Asset Management

the market. This could be ascertained by doing the analysis over several shorter periods and observing if the betas change significantly over the different periods. However as any meaningful analysis will have to include an entire real estate cycle, the NCREIF database does not provide sufficient historic data to test this hypothesis.

The Size factor, works opposite to the way it does in the stock market[13], with larger properties commanding an expected return premium. This could possibly signify a 'illiquidity premium' as it may be more difficult to sell larger properties then smaller properties in a market downturn. This hypothesis could be further analyzed by creating a 'illiquidity factor' that represents transactions (in terms of numbers transacted / total properties as well as 'shelf time') for the portfolios over the historic period.

The Tier factor, surprisingly gives an expected return premium to properties in upper tier CBSAs. However the coefficient value is small as compared to that of the other factors signifying that this factor has limited influence. This premium seems counter intuitive to a possible 'illiquidity factor' as it is seems that selling properties in Tier III CBSA's will prove to be more difficult due to the lack of a 'deep' market for institutional quality commercial real estate.

The Property Type factor, proved to be the most significant determinant (collectively) of market pricing, with decreasing risk premiums required in the order of Apartments, Retail, R&D, Warehouse, Suburban Office and CBD Office. Again it is difficult to ascertain the reasons for this pricing. This could represent a systematic 'personal' preference of the investment managers, stemming from their varying comfort levels with particular property types (for example managers may be more comfortable assessing risks associated with the longer term brand name tenants in office properties rather than those with the shorter term, numerous unknown tenants in apartments). This could also represent the risk averse nature (on a personal level) of the investment manager. He / she would prefer to hold larger flashy office properties as they visually appear to be solid investments to the investor ("picture on the wall affect").

[13] Small cap stocks typically command a risk premium over large cap stocks possibly signifying a 'illiquidity premium' required as small cap stocks trade less frequently and have a higher bid-ask spread.

Summary & Conclusions

This thesis finds that an equilibrium asset pricing model consisting of the two Fama-French-like factors, property size and MSA tier, plus property type dummy variables, explains some 90% of the long-run historical cross-section of core property portfolio returns. Interestingly (and in contrast to the stock market), the "market factor", the beta with respect to aggregate NCREIF, is found to be insignificant, and possibly a ***negative*** influence on expected return. (We still leave it in the model for the sake of form.) Furthermore, the size factor works opposite to the way it does in the stock market, with larger properties commanding an expected return premium. Surprisingly, the city "tier" factor gives a price discount (expected return premium) to upper tier cities. The main determinant was the property type factor. Tests for an "income factor" (similar to the Fama-French book-to-market factor) found this factor to be insignificant. Thus, the equilibrium asset price model that seems to work well within the institutional core real estate asset class seems to be very different from, almost opposite to, the analogous model within the stock market.

The direct application of this study by a portfolio manager depends on his/her philosophical view of this study. If the manager is confident in the accuracy of his/her pricing preferences and these preferences are different from those of the market (i.e. that apartments should not command a premium, and/or that large properties shouldn't require a premium) then this model clearly shows the premiums for each of the factors and thus the opportunity for superior risk adjusted returns based on the managers preferences.

If the manager believes that his/her pricing preferences should be consistent with those of the market's ("market knows best") then this model can be used to evaluate investment decisions ex ante. If a projected investment can produce superior returns based on the manger's own projections (higher than the market equilibrium return projected by the model), then this is a projected positive 'alpha[14]' generating investment and one should proceed with the investment. This model can then also be used to test the ex-post performance of a portfolio manager by

[14] Higher returns with no additional risk)

adjusting his/her portfolio for the model factor premiums and testing if the manger produced 'alpha'.

However it is important to understand the limitation of this model before making investment decisions. This model is an accurate asset pricing model of the ***historic*** NCREIF database. If one believes that recently commercial real estate has undergone a systematic[15] change in pricing then the factor coefficients may have changed significantly and the model will not accurately reflect the market asset pricing ***going forward***.

[15] This is the view of some investment managers that I have spoken with

Study Limitations and Scope for Further Research

Limitations

The study is limited by the relatively short time span of the NCREIF database. The data begins in 1978 as compared to data from the stock market which begins from 1925 (CRSP monthly data). As such I have only been able to include one real estate cycle for this analysis. Ideally the study should have included several cycles as well as analyzed each cycle separately to identify if the factor coefficients change significantly over time[16].

The study is also limited by the accuracy of the NCREIF database. The beginning entries of the database may have less accuracy than later. This issue has been some what circumvented by beginning my analysis from 1984, a period by which the database had considerably improved.

Another possible limitation is the limited number of properties in each portfolio, mainly in the earlier period. In 1984 the total number of properties in the NCREIF database was 994 and in 2003 it was 4,055. All possible care was to taken to ensure adequate number of properties in each portfolio in the early period. As the variations in the returns for the properties within a portfolio are idiosyncratic, there will be a wider range in the estimation of the beta.

Scope for further research

The study has shown that the Size, Tier and Property Type factors are significant and the high R square of the multi factor model demonstrates that almost all factors that the market prices have been included in this model. Interestingly, it is difficult to interpret how and why the market prices these factors. These factors are likely proxies for quantitative risks such as illiquidity or fund level expenses, or they could be proxies for qualitative systematic behavioral preferences of the investment managers. Some of the possible proxies have been described in Chapter 4. Further

[16] Stock betas are calculated over a period of five years – the time period during which they remain mostly the same.

research can confirm these proxies if, by adding representative factors in the model, the existing factors loose significance.

It is important to note that the reasons mentioned for the factor pricing described earlier are of the personal view of the author and have not been quantitatively researched. This is one of the areas that have the potential for further research.

This study has been conducted with the assumption that the beta of the portfolio with respect to the National Wealth Portfolio (NWP) is equal to the beta of the portfolio with respect to the NCREIF aggregated portfolio times the beta of the NCREIF portfolio with respect to the NWP. This assumption has proved to be accurate in earlier studies but may be tested by conducting this research directly with respect to the NWP. However this would involve the 'un smoothening[17]' of the NCREIF data in order to make an 'apples to apples' comparison.

As described earlier the NCREIF data set is weighted towards large size commercial real estate located in Tier I CBSAs. Thus the exposure of this research to small value properties in Tier III CBSA's is limited. Possible further research would involve completing a similar study based on a more comprehensive database such as that of Portfolio Property Research (PPR). However although these databases cover a wider spectrum of properties the time period of the database is limited. In any case covering the recent five years would provide an interesting comparison.

[17] This is due to the appraisal based valuation of the NCREIF database. Un smoothening can be done by an autoregressive process – Refer Geltner and Miller (2001)

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Appendix

Table 5: Details of Combined CBSAs

Number of records	CBSA	CBSA Name	CBSAorDIV
2236	14460	MA - Boston	14484
2608	14460	MA - Cambridge	15764
328	14460	MA - Essex County	21604
152	14460	NH - Rockingham County	40484
14830	16980	IL - Chicago	16974
1382	16980	IL - Lake County	29404
16	16980	IN - Gary	23844
12170	19100	TX - Dallas	19124
2033	19100	TX - Fort Worth	23104
636	19820	MI - Detroit	19804
1501	19820	MI - Warren	47644
13325	31100	CA - Los Angeles	31084
7118	31100	CA - Santa Ana	42044
3249	33100	FL - Fort Lauderdale	22744
2067	33100	FL - Miami	33124
2236	33100	FL - West Palm Beach	48424
1756	35620	NJ - Edison	20764
627	35620	NJ - Newark	35084
486	35620	NY - Nassau	35004
3515	35620	NY - New York	35644
425	37980	DE - Wilmington	48864
1259	37980	NJ - Camden	15804
2937	37980	PA - Philadelphia	37964
5425	41860	CA - Oakland	36084
3561	41860	CA - San Francisco	41884
6665	42660	WA - Seattle	42644
315	42660	WA - Tacoma	45104
8897	47900	DC - Washington	47894
3045	47900	MD - Bethesda	13644

Table 6: Tier Distribution - Apartments

Apartments

CBSA	Order	CBSAName
47900	1	DC - Washington
33100	2	FL - Miami
19100	3	TX - Dallas
16980	4	IL - Chicago
31100	5	CA - Los Angeles
35620	6	NY - New York
12060	7	GA - Atlanta
41860	8	CA - San Francisco
41740	9	CA - San Diego
19740	10	CO - Denver
26420	11	TX - Houston
38060	12	AZ - Phoenix
14460	13	MA - Boston
42660	14	WA - Seattle
12420	15	TX - Austin
29820	16	NV - Las Vegas
36740	17	FL - Orlando
37980	18	PA - Philadelphia
45300	19	FL - Tampa
40140	20	CA - Riverside
33460	21	MN - Minneapolis
38900	22	OR - Portland
16740	23	NC - Charlotte
28140	25	MO - Kansas City
19820	26	MI - Detroit
39580	27	NC - Raleigh
41620	28	UT - Salt Lake City
41180	29	MO - St. Louis
32820	30	TN - Memphis
14860	31	CT - Bridgeport
37100	32	CA - Oxnard
20500	33	NC - Durham
10740	34	NM - Albuquerque
26900	35	IN - Indianapolis
46700	36	CA - Vallejo
38300	37	PA - Pittsburgh
25540	38	CT - Hartford
17820	39	CO - Colorado Springs
40060	40	VA - Richmond
18140	41	OH - Columbus
17140	42	OH - Cincinnati
34980	43	TN - Nashville
41700	44	TX - San Antonio
46060	45	AZ - Tucson
46140	46	OK - Tulsa
39900	47	NV - Reno
27260	48	FL - Jacksonville
41940	49	CA - San Jose
13820	50	AL - Birmingham
45940	51	NJ - Trenton
40900	52	CA - Sacramento
17460	53	OH - Cleveland
39100	54	NY - Poughkeepsie
24340	55	MI - Grand Rapids
39300	56	RI - Providence
42140	57	NM - Santa Fe
28020	58	MI - Kalamazoo
31700	59	NH - Manchester
33340	59	WI - Milwaukee
36540	61	NE - Omaha
17900	62	SC - Columbia
42220	63	CA - Santa Rosa
24860	64	SC - Greenville
49340	65	MA - Worcester
15980	66	FL - Cape Coral
26620	67	AL - Huntsville
11460	68	MI - Ann Arbor
25060	69	MS - Gulfport
37340	70	FL - Palm Bay
29940	71	KS - Lawrence

Table 7: Tier Distribution - Warehouse

Warehouse		
CBSA	Order	CBSAName
31100	1	CA - Los Angeles
19100	2	TX - Dallas
16980	3	IL - Chicago
12060	4	GA - Atlanta
40140	5	CA - Riverside
26900	6	IN - Indianapolis
35620	7	NY - New York
41860	8	CA - San Francisco
42660	9	WA - Seattle
12580	10	MD - Baltimore
33100	11	FL - Miami
32820	12	TN - Memphis
41740	13	CA - San Diego
41940	14	CA - San Jose
14460	15	MA - Boston
38900	16	OR - Portland
37980	17	PA - Philadelphia
26420	18	TX - Houston
36740	19	FL - Orlando
47900	20	DC - Washington
17140	21	OH - Cincinnati
16740	22	NC - Charlotte
39900	23	NV - Reno
38060	24	AZ - Phoenix
33460	25	MN - Minneapolis
19740	26	CO - Denver
41180	27	MO - St. Louis
12420	28	TX - Austin
46700	30	CA - Vallejo
18140	31	OH - Columbus
31140	32	KY - Louisville
10900	33	PA - Allentown
40900	34	CA - Sacramento
49340	35	MA - Worcester
41620	36	UT - Salt Lake City
25420	37	PA - Harrisburg
19820	38	MI - Detroit
36420	39	OK - Oklahoma City
34980	40	TN - Nashville
45300	41	FL - Tampa
39580	42	NC - Raleigh
41700	43	TX - San Antonio
39300	44	RI - Providence
12020	45	GA - Athens
99999	46	
40060	47	VA - Richmond
39100	48	NY - Poughkeepsie
17460	49	OH - Cleveland
36500	50	WA - Olympia
39740	51	PA - Reading
38300	52	PA - Pittsburgh
31700	53	NH - Manchester
44700	54	CA - Stockton
27260	55	FL - Jacksonville
11300	56	IN - Anderson
10420	57	OH - Akron
21340	58	TX - El Paso
37100	59	CA - Oxnard
33340	60	WI - Milwaukee
35300	61	CT - New Haven
24340	62	MI - Grand Rapids
22180	63	NC - Fayetteville
47300	64	CA - Visalia
44140	65	MA - Springfield
32860	66	WI - Menomonie
42540	66	PA - Scranton
19500	68	IL - Decatur
35380	69	LA - New Orleans
26180	70	HI - Honolulu
43140	71	NC - Shelby

Table 8: Tier Distribution – Office CBD

Office CBD		
CBSA	Order	CBSAName
35620	1	NY - New York
47900	2	DC - Washington
14460	3	MA - Boston
41860	4	CA - San Francisco
16980	5	IL - Chicago
42660	6	WA - Seattle
26420	7	TX - Houston
33100	8	FL - Miami
33460	9	MN - Minneapolis
19740	10	CO - Denver
26180	11	HI - Honolulu
31100	12	CA - Los Angeles
17140	13	OH - Cincinnati
17460	14	OH - Cleveland
19100	15	TX - Dallas
37980	16	PA - Philadelphia
41740	17	CA - San Diego
18140	18	OH - Columbus
12060	19	GA - Atlanta
16740	20	NC - Charlotte
40900	21	CA - Sacramento
38060	22	AZ - Phoenix
36740	23	FL - Orlando
38300	24	PA - Pittsburgh
38900	25	OR - Portland
26900	26	IN - Indianapolis
12420	28	TX - Austin
12580	29	MD - Baltimore
41620	30	UT - Salt Lake City
31140	31	KY - Louisville
41700	32	TX - San Antonio
45300	33	FL - Tampa
25420	34	PA - Harrisburg
41940	35	CA - San Jose
24860	36	SC - Greenville
39900	37	NV - Reno
30780	38	AR - Little Rock

Table 9: Tier Distribution – Office Suburban

Office Suburban		
CBSA	Order	CBSAName
31100	1	CA - Los Angeles
47900	2	DC - Washington
41860	3	CA - San Francisco
35620	4	NY - New York
16980	5	IL - Chicago
12060	6	GA - Atlanta
14460	7	MA - Boston
19100	8	TX - Dallas
33100	9	FL - Miami
19740	10	CO - Denver
38060	11	AZ - Phoenix
41740	12	CA - San Diego
26420	13	TX - Houston
14860	14	CT - Bridgeport
41940	15	CA - San Jose
12420	16	TX - Austin
33460	17	MN - Minneapolis
28140	18	MO - Kansas City
45300	19	FL - Tampa
16740	20	NC - Charlotte
41180	21	MO - St. Louis
42660	22	WA - Seattle
39580	23	NC - Raleigh
19820	25	MI - Detroit
12580	26	MD - Baltimore
34980	27	TN - Nashville
38900	28	OR - Portland
36740	29	FL - Orlando
49340	30	MA - Worcester
38300	31	PA - Pittsburgh
18140	32	OH - Columbus
45940	33	NJ - Trenton
17140	34	OH - Cincinnati
40900	35	CA - Sacramento
13820	36	AL - Birmingham
37100	37	CA - Oxnard
41700	38	TX - San Antonio
47260	39	VA - Virginia Beach
24660	40	NC - Greensboro
17820	41	CO - Colorado Springs
41540	42	MD - Salisbury
40060	43	VA - Richmond
33340	44	WI - Milwaukee
14500	45	CO - Boulder
27260	46	FL - Jacksonville
39300	47	RI - Providence
40140	48	CA - Riverside
34940	49	FL - Naples
36540	50	NE - Omaha
25540	51	CT - Hartford
10740	52	NM - Albuquerque
41620	53	UT - Salt Lake City
46140	54	OK - Tulsa
17460	55	OH - Cleveland
45820	56	KS - Topeka
10420	57	OH - Akron
32820	60	TN - Memphis
15980	61	FL - Cape Coral
31700	62	NH - Manchester
43780	63	IN - South Bend
26900	64	IN - Indianapolis
21340	65	TX - El Paso
18180	66	NH - Concord

Table 10: Tier Distribution – Industrial R&D + Flex

R&D and Flex		
CBSA	Order	CBSAName
31100	1	CA - Los Angeles
41860	2	CA - San Francisco
41740	3	CA - San Diego
42660	4	WA - Seattle
38060	5	AZ - Phoenix
14460	6	MA - Boston
38900	7	OR - Portland
47900	8	DC - Washington
41940	9	CA - San Jose
16980	10	IL - Chicago
33460	11	MN - Minneapolis
12060	12	GA - Atlanta
19100	13	TX - Dallas
40140	14	CA - Riverside
35620	15	NY - New York
12420	16	TX - Austin
26900	17	IN - Indianapolis
33100	18	FL - Miami
36740	19	FL - Orlando
42060	20	CA - Santa Barbara
28140	21	MO - Kansas City
40900	22	CA - Sacramento
17140	26	OH - Cincinnati
37100	27	CA - Oxnard
45300	28	FL - Tampa
39300	29	RI - Providence
14500	30	CO - Boulder
32820	31	TN - Memphis
46140	32	OK - Tulsa
37980	33	PA - Philadelphia
16700	34	SC - Charleston
26420	35	TX - Houston
39900	36	NV - Reno
41700	37	TX - San Antonio
41180	38	MO - St. Louis
10420	39	OH - Akron
40060	40	VA - Richmond
17020	41	CA - Chico
17820	42	CO - Colorado Springs
19820	43	MI - Detroit
17460	44	OH - Cleveland

Table 11: Tier Distribution - Retail

Retail

CBSA	Order	CBSAName
31100	1	CA - Los Angeles
47900	2	DC - Washington
16980	3	IL - Chicago
19100	4	TX - Dallas
33100	5	FL - Miami
41860	6	CA - San Francisco
12060	7	GA - Atlanta
41740	8	CA - San Diego
42660	9	WA - Seattle
38060	10	AZ - Phoenix
33460	11	MN - Minneapolis
14460	12	MA - Boston
37980	13	PA - Philadelphia
35620	14	NY - New York
12580	15	MD - Baltimore
19740	16	CO - Denver
41700	17	TX - San Antonio
38900	18	OR - Portland
36740	19	FL - Orlando
26420	20	TX - Houston
12420	21	TX - Austin
41940	22	CA - San Jose
40900	23	CA - Sacramento
34940	24	FL - Naples
25540	25	CT - Hartford
27260	26	FL - Jacksonville
34980	27	TN - Nashville
41180	28	MO - St. Louis
13780	29	NY - Binghamton
26180	30	HI - Honolulu
45300	31	FL - Tampa
16700	32	SC - Charleston
27980	33	HI - Kahului
39580	34	NC - Raleigh
14500	35	CO - Boulder
47260	36	VA - Virginia Beach
18140	37	OH - Columbus
40060	38	VA - Richmond
29820	39	NV - Las Vegas
32820	40	TN - Memphis
19820	41	MI - Detroit
24860	42	SC - Greenville
42060	43	CA - Santa Barbara
28140	44	MO - Kansas City
42020	45	CA - San Luis Obispo
33340	46	WI - Milwaukee
10900	47	PA - Allentown
38300	48	PA - Pittsburgh
36540	49	NE - Omaha
17140	50	OH - Cincinnati
40140	51	CA - Riverside
10420	52	OH - Akron
25420	53	PA - Harrisburg
29620	54	MI - Lansing
37340	55	FL - Palm Bay
13380	56	WA - Bellingham
36220	57	TX - Odessa
39740	58	PA - Reading
16740	59	NC - Charlotte
24660	60	NC - Greensboro
12260	61	GA - Augusta
16300	62	IA - Cedar Rapids
15980	63	FL - Cape Coral
37100	64	CA - Oxnard
26900	65	IN - Indianapolis
38940	66	FL - Port St. Lucie
39460	67	FL - Punta Gorda
34900	68	CA - Napa
42260	69	FL - Sarasota
39900	70	NV - Reno

Table 12: Index Values – Apartments by Size

Capital Return					Total Return				
Qtrs	Small	Medium	Large	Total	Qtrs	Small	Medium	Large	Total
1983.75	100.0	100.0	100.0	100.0	1983.75	100.0	100.0	100.0	100.0
1984.00	100.0	101.9	100.0	101.6	1984.00	101.5	103.2	100.6	103.0
1984.25	93.0	103.9	119.4	104.7	1984.25	95.5	106.8	121.8	107.5
1984.50	93.2	104.9	119.6	105.5	1984.50	96.7	109.3	123.5	109.8
1984.75	93.2	106.0	122.2	106.7	1984.75	98.2	111.6	128.3	112.3
1985.00	103.9	105.9	121.6	107.1	1985.00	110.9	113.4	129.8	114.6
1985.25	104.2	105.7	125.5	107.4	1985.25	113.2	114.7	135.9	116.5
1985.50	104.3	107.9	126.5	109.3	1985.50	114.3	119.1	139.7	120.7
1985.75	103.7	108.9	146.2	111.6	1985.75	115.3	122.0	163.1	125.0
1986.00	95.5	109.8	146.6	111.9	1986.00	106.8	124.6	165.7	126.9
1986.25	85.8	111.1	145.7	111.3	1986.25	97.5	127.9	166.5	128.0
1986.50	84.8	110.7	144.9	110.7	1986.50	97.6	129.2	174.4	129.6
1986.75	85.0	112.6	145.0	112.4	1986.75	98.7	133.4	177.1	133.3
1987.00	79.9	112.6	147.7	111.4	1987.00	93.9	135.4	183.3	134.2
1987.25	77.1	111.8	148.5	110.0	1987.25	92.1	136.6	188.4	134.6
1987.50	77.5	112.8	148.9	110.7	1987.50	93.7	139.9	192.5	137.6
1987.75	78.2	114.6	149.2	112.2	1987.75	96.0	144.1	196.2	141.4
1988.00	77.9	114.3	153.9	112.2	1988.00	97.1	145.8	204.2	143.5
1988.25	77.2	115.0	154.3	112.5	1988.25	97.6	149.0	208.7	146.2
1988.50	77.5	116.0	161.3	113.8	1988.50	99.7	152.5	221.8	150.1
1988.75	77.0	116.1	166.5	114.1	1988.75	100.5	155.1	231.6	152.7
1989.00	77.1	116.4	168.9	114.5	1989.00	101.6	157.9	238.2	155.4
1989.25	75.5	116.0	168.4	113.6	1989.25	100.8	159.5	241.0	156.4
1989.50	75.6	116.2	171.4	114.1	1989.50	102.6	162.2	248.8	159.4
1989.75	75.6	117.1	179.3	115.3	1989.75	104.3	165.7	264.2	163.4
1990.00	75.6	117.2	182.0	115.6	1990.00	106.2	168.7	271.8	166.7
1990.25	75.5	117.5	182.8	115.8	1990.25	108.0	171.8	275.9	169.6
1990.50	75.5	117.3	183.8	115.8	1990.50	109.8	174.2	280.4	172.1
1990.75	74.5	116.8	180.6	114.7	1990.75	111.7	176.2	278.6	173.9
1991.00	73.6	115.7	177.5	113.4	1991.00	112.2	177.4	277.4	174.7
1991.25	73.0	115.1	177.5	112.8	1991.25	113.3	179.2	281.4	176.6
1991.50	72.4	113.5	177.5	111.7	1991.50	114.4	179.6	285.2	177.7
1991.75	68.3	108.4	172.7	106.6	1991.75	110.1	174.5	281.1	172.6
1992.00	68.1	107.4	172.2	106.0	1992.00	111.7	176.1	284.5	174.5
1992.25	66.7	106.2	168.8	104.4	1992.25	111.6	177.1	284.3	175.0
1992.50	66.2	105.7	166.5	103.6	1992.50	112.8	179.5	285.2	176.9
1992.75	64.4	104.7	165.3	102.2	1992.75	112.0	181.4	287.9	177.9
1993.00	64.0	104.5	164.5	101.9	1993.00	113.7	184.9	291.1	180.9
1993.25	64.1	105.0	163.5	102.1	1993.25	116.0	189.8	294.1	184.9
1993.50	64.7	105.3	164.1	102.6	1993.50	119.3	194.0	300.3	189.3
1993.75	65.9	108.8	165.5	105.2	1993.75	123.8	204.4	308.3	197.9
1994.00	66.1	109.3	167.3	105.7	1994.00	126.7	209.6	317.0	202.9
1994.25	66.4	110.6	167.4	106.6	1994.25	129.7	216.4	323.2	208.7
1994.50	67.1	111.5	167.9	107.4	1994.50	133.4	222.2	330.6	214.2
1994.75	68.4	115.6	169.5	110.4	1994.75	138.5	234.5	339.8	224.1
1995.00	68.7	116.4	170.3	111.1	1995.00	142.2	241.0	348.2	230.2
1995.25	69.4	117.2	172.0	112.0	1995.25	145.9	247.4	358.9	236.4
1995.50	69.5	117.7	174.2	112.5	1995.50	148.9	253.1	370.7	242.1
1995.75	71.1	120.5	176.9	115.1	1995.75	155.2	264.0	383.8	252.2
1996.00	71.3	121.9	178.0	116.1	1996.00	158.3	272.1	393.5	259.1
1996.25	71.4	122.8	180.2	116.9	1996.25	161.5	279.5	406.2	265.9
1996.50	71.9	123.8	181.8	117.8	1996.50	165.7	287.1	417.2	273.1
1996.75	72.5	125.4	183.6	119.2	1996.75	170.0	296.2	429.0	281.3
1997.00	72.6	125.7	186.1	119.7	1997.00	173.2	302.2	441.9	287.5
1997.25	73.1	126.5	191.2	120.9	1997.25	178.1	309.9	462.2	295.8
1997.50	73.8	127.8	196.0	122.3	1997.50	183.1	318.5	482.8	304.9
1997.75	75.8	130.2	200.6	124.9	1997.75	191.5	330.4	502.6	317.0
1998.00	76.1	131.3	204.2	126.0	1998.00	196.1	339.7	521.2	326.0
1998.25	76.7	133.2	208.2	127.9	1998.25	201.1	351.1	541.1	336.8
1998.50	77.9	135.4	213.7	130.2	1998.50	207.3	363.3	565.1	348.7
1998.75	79.7	137.9	217.3	132.6	1998.75	214.9	376.1	583.6	360.9
1999.00	80.1	139.0	221.8	133.9	1999.00	219.7	386.2	604.4	370.7
1999.25	80.6	140.2	224.1	135.0	1999.25	224.8	395.9	619.9	380.0
1999.50	81.3	141.3	227.2	136.2	1999.50	230.1	405.8	638.8	389.7
1999.75	82.9	143.4	231.0	138.4	1999.75	238.4	418.1	659.9	402.2
2000.00	82.7	144.4	233.7	139.2	2000.00	242.4	428.4	678.7	411.6
2000.25	83.3	145.8	238.5	140.7	2000.25	247.6	440.1	704.9	422.9
2000.50	83.5	147.2	244.3	142.1	2000.50	252.2	451.8	734.9	434.4
2000.75	85.1	149.8	252.6	145.0	2000.75	261.0	467.4	771.9	450.4
2001.00	85.2	150.6	255.7	145.8	2001.00	266.0	478.7	794.7	461.0

Table 13: Index Values - Industrial R&D + Flex by Size

Capital Return					Total Return				
Qtrs	Small	Medium	Large	Total	Qtrs	Small	Medium	Large	Total
1983.75	100.0	100.0	100.0	100.0	1983.75	100.0	100.0	100.0	100.0
1984.00	103.6	103.9	101.7	103.5	1984.00	105.1	105.1	103.4	104.8
1984.25	105.5	106.0	105.8	105.8	1984.25	108.6	109.1	108.9	108.9
1984.50	107.7	107.7	109.2	108.0	1984.50	112.3	112.8	112.9	112.6
1984.75	108.9	109.1	113.5	109.7	1984.75	115.1	116.3	118.7	116.2
1985.00	111.2	110.1	115.1	111.4	1985.00	119.6	119.5	122.8	120.1
1985.25	112.4	110.1	115.7	112.0	1985.25	123.1	121.6	125.4	122.9
1985.50	113.5	110.9	118.1	113.2	1985.50	126.3	124.1	129.8	126.0
1985.75	112.8	112.1	122.5	114.1	1985.75	127.7	127.5	136.5	129.2
1986.00	108.9	111.8	124.1	112.6	1986.00	125.3	129.5	140.1	129.5
1986.25	109.8	112.7	125.7	113.6	1986.25	127.8	132.6	144.2	132.5
1986.50	109.2	113.2	128.1	113.9	1986.50	128.5	134.7	148.5	134.3
1986.75	106.9	113.6	131.3	113.5	1986.75	127.4	137.1	153.9	135.5
1987.00	105.4	113.9	131.8	112.9	1987.00	127.0	139.6	156.5	136.6
1987.25	104.4	115.1	131.1	112.7	1987.25	127.2	142.6	158.2	138.0
1987.50	104.0	116.4	131.5	113.1	1987.50	128.2	146.3	161.1	140.4
1987.75	100.1	118.1	135.0	112.4	1987.75	124.9	150.1	167.4	141.1
1988.00	98.5	119.6	136.6	112.3	1988.00	124.3	154.1	171.7	142.8
1988.25	99.1	120.1	137.0	112.9	1988.25	125.8	156.6	175.1	145.0
1988.50	98.7	121.5	139.6	113.4	1988.50	126.4	160.8	180.9	147.5
1988.75	97.8	122.2	141.3	113.5	1988.75	126.2	163.4	185.2	148.8
1989.00	98.1	122.9	143.3	114.1	1989.00	128.2	167.0	190.5	151.8
1989.25	97.4	123.0	143.7	113.8	1989.25	128.5	169.5	193.3	153.2
1989.50	97.2	122.8	145.8	114.0	1989.50	129.8	171.4	199.1	155.3
1989.75	95.9	123.6	148.4	113.9	1989.75	129.7	174.5	205.1	157.1
1990.00	96.1	123.8	147.2	113.9	1990.00	131.7	177.3	206.4	159.3
1990.25	94.9	123.5	147.8	113.2	1990.25	131.6	179.6	210.0	160.5
1990.50	93.4	123.2	147.9	112.3	1990.50	131.1	181.6	212.0	161.0
1990.75	86.4	120.9	145.2	107.1	1990.75	122.8	181.4	210.8	155.9
1991.00	85.2	119.3	142.0	105.5	1991.00	122.6	181.7	209.4	155.6
1991.25	83.6	118.4	140.8	104.1	1991.25	122.3	183.4	211.8	156.2
1991.50	79.4	115.4	136.5	100.2	1991.50	117.9	181.0	208.9	152.6
1991.75	76.1	110.7	130.3	96.0	1991.75	114.4	176.3	203.2	148.3
1992.00	73.5	107.3	126.7	92.9	1992.00	111.8	174.0	201.3	145.8
1992.25	71.8	102.8	125.1	90.4	1992.25	110.8	169.3	202.5	144.0
1992.50	69.7	100.2	122.7	88.0	1992.50	108.9	167.9	202.7	142.4
1992.75	66.4	96.2	117.5	84.2	1992.75	105.1	164.0	198.2	138.4
1993.00	64.6	95.5	114.9	82.6	1993.00	103.7	165.6	198.5	138.1
1993.25	63.7	95.4	114.7	82.0	1993.25	103.8	168.3	201.5	139.3
1993.50	62.8	94.1	114.4	81.0	1993.50	104.4	168.4	204.2	140.1
1993.75	61.8	94.4	111.5	80.2	1993.75	104.8	171.5	202.1	141.0
1994.00	61.7	94.5	110.6	80.1	1994.00	106.8	174.7	204.4	143.6
1994.25	61.8	94.4	110.3	80.1	1994.25	108.7	178.0	207.6	146.1
1994.50	61.8	94.2	110.6	80.0	1994.50	110.5	180.6	212.3	148.6
1994.75	61.7	94.7	111.2	80.2	1994.75	112.1	184.1	217.5	151.2
1995.00	61.7	96.2	112.1	80.9	1995.00	114.7	190.4	224.1	155.7
1995.25	62.3	97.3	113.4	81.7	1995.25	118.3	196.1	231.1	160.4
1995.50	62.5	98.0	114.8	82.3	1995.50	121.8	201.3	238.3	165.0
1995.75	62.0	99.0	116.5	82.5	1995.75	123.0	207.0	243.9	168.3
1996.00	62.4	100.2	119.5	83.5	1996.00	126.5	214.4	255.0	174.0
1996.25	62.9	101.9	118.5	84.3	1996.25	130.2	222.5	258.0	179.3
1996.50	63.9	103.4	124.3	86.0	1996.50	134.5	230.3	274.3	186.2
1996.75	65.7	106.5	127.1	88.4	1996.75	140.6	241.6	286.0	194.8
1997.00	66.9	109.6	130.4	90.6	1997.00	145.8	253.4	298.9	203.2
1997.25	69.1	113.2	136.9	93.7	1997.25	153.2	266.4	321.0	214.4
1997.50	70.7	117.0	145.1	97.0	1997.50	159.2	280.6	346.5	225.6
1997.75	74.4	123.7	150.8	102.0	1997.75	170.8	302.3	365.8	241.8
1998.00	75.8	126.8	157.5	104.7	1998.00	177.7	316.2	389.6	253.3
1998.25	78.2	133.1	164.1	109.0	1998.25	187.0	338.0	412.7	268.5
1998.50	79.8	135.9	171.7	111.7	1998.50	194.7	351.2	439.2	280.5
1998.75	82.2	136.8	177.9	114.1	1998.75	203.5	360.1	460.2	290.9
1999.00	83.0	137.9	181.4	115.3	1999.00	209.4	370.4	472.9	299.3
1999.25	84.2	140.1	183.1	116.9	1999.25	216.3	383.1	485.7	309.0
1999.50	85.4	141.5	186.5	118.5	1999.50	223.4	394.4	502.0	318.8
1999.75	86.7	143.5	193.8	120.7	1999.75	231.1	406.8	526.3	330.1
2000.00	87.5	146.3	197.9	122.7	2000.00	238.3	422.8	546.0	341.9
2000.25	88.9	149.4	205.4	125.3	2000.25	245.1	439.0	575.9	354.6
2000.50	89.1	150.5	234.3	129.2	2000.50	250.7	450.1	667.7	372.2
2000.75	90.0	154.6	250.9	132.9	2000.75	257.5	468.9	725.0	388.8
2001.00	90.1	155.7	253.6	133.6	2001.00	262.9	480.7	746.0	398.1

Table 14: Index Values - Industrial Warehouse by Size

Capital Return					Total Return				
Qtrs	Small	Medium	Large	Total	Qtrs	Small	Medium	Large	Total
1983.75	100.0	100.0	100.0	100.0	1983.75	100.0	100.0	100.0	100.0
1984.00	101.3	101.8	102.4	101.7	1984.00	102.8	103.0	103.9	103.1
1984.25	102.1	102.5	104.4	102.6	1984.25	105.3	105.5	107.6	105.7
1984.50	103.7	104.6	106.2	104.5	1984.50	108.6	109.3	111.2	109.3
1984.75	103.8	106.6	109.1	105.8	1984.75	111.0	113.2	116.1	112.7
1985.00	105.7	107.0	110.1	107.0	1985.00	115.1	115.5	119.1	115.9
1985.25	106.9	108.8	110.9	108.3	1985.25	118.5	119.4	122.3	119.5
1985.50	108.4	111.5	113.3	110.5	1985.50	122.2	124.1	127.0	123.8
1985.75	108.4	113.7	115.7	111.7	1985.75	124.3	128.3	132.1	127.2
1986.00	108.0	114.2	116.9	111.9	1986.00	125.8	131.1	135.6	129.5
1986.25	108.7	115.3	118.0	112.8	1986.25	128.8	134.3	138.7	132.6
1986.50	110.3	115.7	118.4	113.8	1986.50	132.7	137.1	141.1	135.8
1986.75	110.4	116.7	119.6	114.4	1986.75	134.9	140.3	144.8	138.7
1987.00	110.5	118.0	120.9	115.1	1987.00	136.9	144.2	148.9	141.6
1987.25	110.8	118.8	121.4	115.6	1987.25	139.5	147.6	151.8	144.6
1987.50	111.8	119.0	123.5	116.5	1987.50	142.8	150.4	157.0	148.0
1987.75	111.2	120.9	128.6	117.5	1987.75	144.2	155.3	165.4	151.5
1988.00	111.9	121.7	130.0	118.3	1988.00	147.4	158.9	169.1	154.9
1988.25	112.3	122.9	131.7	119.1	1988.25	150.2	162.7	173.7	158.3
1988.50	112.1	123.7	133.5	119.5	1988.50	152.3	166.3	178.5	161.3
1988.75	112.3	125.1	136.9	120.6	1988.75	155.2	170.7	185.3	165.2
1989.00	112.4	125.8	138.4	121.1	1989.00	157.9	174.4	190.1	168.5
1989.25	113.4	126.5	140.2	122.0	1989.25	161.2	177.5	195.2	172.0
1989.50	113.7	128.4	143.3	123.2	1989.50	163.6	182.7	201.9	175.9
1989.75	112.4	130.0	145.6	123.2	1989.75	163.9	187.5	207.6	178.2
1990.00	110.2	130.2	146.9	122.1	1990.00	162.7	190.7	212.0	179.0
1990.25	110.2	131.2	147.7	122.5	1990.25	165.2	194.9	216.1	182.1
1990.50	108.2	131.4	146.5	121.1	1990.50	164.2	198.0	216.9	182.4
1990.75	105.5	129.3	144.2	118.6	1990.75	162.5	197.9	216.0	181.2
1991.00	103.9	128.8	143.5	117.4	1991.00	162.2	200.1	218.2	182.0
1991.25	103.2	128.2	141.6	116.6	1991.25	162.9	202.3	218.9	183.1
1991.50	101.2	126.7	140.0	114.7	1991.50	161.8	203.1	220.1	182.8
1991.75	97.5	122.3	132.1	110.2	1991.75	158.0	198.6	210.5	177.9
1992.00	97.0	121.1	130.9	109.4	1992.00	159.4	199.8	212.4	179.4
1992.25	94.7	120.1	128.3	107.4	1992.25	158.0	201.5	211.4	178.9
1992.50	93.5	117.8	126.4	105.8	1992.50	158.4	201.0	211.7	179.0
1992.75	91.8	114.5	123.3	103.4	1992.75	158.0	198.5	209.6	177.8
1993.00	90.9	113.7	122.7	102.6	1993.00	159.2	200.6	212.3	179.5
1993.25	89.6	110.9	120.5	100.7	1993.25	160.0	199.1	211.7	179.3
1993.50	88.4	109.5	120.5	99.6	1993.50	160.8	200.1	214.9	180.6
1993.75	87.5	107.9	117.4	98.2	1993.75	161.9	200.0	212.8	180.7
1994.00	87.5	108.4	117.0	98.3	1994.00	164.8	204.3	215.9	184.2
1994.25	87.5	108.7	117.1	98.3	1994.25	167.3	208.9	219.6	187.5
1994.50	87.4	109.9	118.8	98.9	1994.50	171.3	215.3	226.6	192.6
1994.75	87.6	110.6	120.8	99.6	1994.75	174.5	221.2	234.5	197.4
1995.00	88.7	111.6	122.8	100.8	1995.00	180.0	227.7	243.0	203.7
1995.25	90.2	112.9	124.5	102.2	1995.25	186.5	235.1	250.5	210.5
1995.50	90.7	114.7	125.3	103.2	1995.50	191.7	243.6	257.3	217.0
1995.75	91.1	115.9	129.0	104.4	1995.75	196.0	250.9	269.0	223.4
1996.00	92.1	117.2	130.8	105.6	1996.00	203.0	259.0	277.7	231.0
1996.25	92.9	117.9	131.9	106.4	1996.25	208.8	265.9	285.5	237.4
1996.50	94.5	119.4	134.0	108.1	1996.50	216.8	274.9	295.3	245.9
1996.75	95.1	120.5	136.6	109.1	1996.75	221.1	282.5	305.8	252.2
1997.00	96.0	121.9	138.1	110.2	1997.00	227.9	291.5	314.9	260.0
1997.25	97.1	123.5	140.5	111.7	1997.25	235.6	300.5	324.2	268.3
1997.50	99.5	126.8	144.5	114.5	1997.50	245.9	314.8	338.6	280.4
1997.75	100.7	128.9	148.7	116.4	1997.75	253.7	326.0	351.8	290.0
1998.00	101.9	130.3	151.1	117.9	1998.00	262.4	336.8	363.8	299.8
1998.25	104.2	133.2	156.3	120.8	1998.25	273.2	351.1	381.4	312.7
1998.50	105.9	136.4	159.1	123.1	1998.50	283.3	366.3	394.5	324.7
1998.75	107.6	137.7	161.8	124.8	1998.75	292.5	376.7	406.9	334.8
1999.00	107.7	139.4	163.6	125.6	1999.00	298.5	388.8	418.7	343.4
1999.25	108.1	141.1	166.1	126.7	1999.25	305.7	401.0	431.8	352.9
1999.50	109.3	142.5	169.5	128.3	1999.50	314.8	412.7	447.4	363.8
1999.75	109.2	144.1	171.7	129.0	1999.75	320.6	424.6	460.1	372.4
2000.00	109.8	145.0	172.4	129.7	2000.00	329.0	435.7	469.4	381.8
2000.25	110.7	147.1	175.7	131.4	2000.25	337.5	450.8	486.4	393.6
2000.50	111.5	149.7	179.3	133.1	2000.50	346.9	467.1	504.3	406.4
2000.75	112.3	151.4	184.1	134.7	2000.75	356.3	481.3	524.9	418.8
2001.00	112.6	153.2	185.9	135.7	2001.00	365.5	496.3	539.2	430.6

Table 15: Index Values - Office CBD by Size

Capital Return					Total Return				
Qtrs	Small	Medium	Large	Total	Qtrs	Small	Medium	Large	Total
1983.75	100.0	100.0	100.0	100.0	1983.75	100.0	100.0	100.0	100.0
1984.00	100.3	98.7	103.1	100.9	1984.00	100.3	100.7	104.4	102.5
1984.25	102.4	100.2	105.9	103.1	1984.25	102.4	103.8	108.7	106.1
1984.50	102.5	101.0	107.7	103.9	1984.50	102.5	105.3	112.0	108.3
1984.75	104.5	106.7	114.5	108.1	1984.75	104.5	112.5	119.2	113.7
1985.00	105.2	107.5	116.6	109.2	1985.00	105.2	114.2	122.6	116.2
1985.25	107.7	107.5	117.7	110.6	1985.25	107.7	114.1	125.0	118.7
1985.50	109.4	108.4	120.4	112.3	1985.50	109.4	116.1	128.4	121.5
1985.75	112.6	108.2	125.3	114.9	1985.75	112.6	116.9	134.7	125.4
1986.00	112.3	108.5	127.0	115.2	1986.00	112.3	118.9	138.5	127.6
1986.25	110.9	109.2	127.8	115.0	1986.25	110.9	120.8	141.4	128.8
1986.50	112.3	109.9	129.0	116.1	1986.50	112.3	122.9	144.3	131.8
1986.75	111.3	109.1	130.3	115.8	1986.75	111.3	123.5	147.0	132.9
1987.00	110.1	109.3	131.4	115.6	1987.00	110.1	125.2	149.9	134.4
1987.25	105.6	107.1	133.2	113.3	1987.25	105.6	124.3	154.0	133.5
1987.50	106.8	107.5	135.3	114.5	1987.50	106.8	126.5	158.7	136.6
1987.75	104.4	108.3	138.7	114.4	1987.75	104.4	128.7	164.8	138.1
1988.00	102.7	108.3	140.1	113.9	1988.00	102.7	130.6	168.7	139.3
1988.25	102.6	108.3	140.9	114.0	1988.25	102.6	132.4	171.8	141.2
1988.50	100.9	107.5	144.6	113.7	1988.50	100.9	133.2	178.8	142.7
1988.75	101.2	107.7	145.1	114.0	1988.75	101.2	134.9	181.5	144.7
1989.00	101.2	108.4	146.0	114.4	1989.00	101.2	137.4	184.8	147.0
1989.25	98.6	111.0	148.2	114.6	1989.25	98.6	142.0	189.5	148.9
1989.50	98.3	111.5	149.7	114.9	1989.50	98.3	144.4	193.5	151.2
1989.75	96.3	111.3	152.7	114.5	1989.75	96.3	144.9	198.7	151.8
1990.00	95.1	111.7	153.6	114.2	1990.00	95.1	146.6	202.1	152.4
1990.25	95.0	111.8	153.2	114.2	1990.25	95.0	147.8	203.8	153.7
1990.50	94.3	112.0	153.3	113.9	1990.50	94.3	149.3	206.6	154.6
1990.75	85.4	106.9	149.8	107.0	1990.75	85.4	144.2	202.7	146.0
1991.00	83.7	105.2	147.4	105.1	1991.00	83.7	143.5	201.7	144.6
1991.25	81.5	102.1	143.4	102.2	1991.25	81.5	141.0	198.6	141.6
1991.50	79.3	101.8	139.2	100.3	1991.50	79.3	142.0	195.2	140.1
1991.75	68.4	93.7	126.8	89.3	1991.75	68.4	131.8	178.3	125.2
1992.00	68.2	92.7	124.9	88.6	1992.00	68.2	131.1	177.4	124.8
1992.25	64.2	89.7	121.0	84.7	1992.25	64.2	129.0	174.2	120.9
1992.50	61.0	87.3	119.9	81.9	1992.50	61.0	127.2	174.4	118.0
1992.75	57.6	81.8	115.0	77.5	1992.75	57.6	120.4	169.0	112.3
1993.00	56.0	79.7	114.1	75.8	1993.00	56.0	119.5	171.1	111.5
1993.25	55.0	78.3	111.4	74.3	1993.25	55.0	119.1	169.1	110.3
1993.50	54.5	78.3	110.0	73.8	1993.50	54.5	120.9	168.6	110.6
1993.75	53.7	75.3	107.2	71.9	1993.75	53.7	118.0	165.7	108.7
1994.00	53.4	75.5	106.8	71.8	1994.00	53.4	119.8	167.5	109.6
1994.25	54.0	75.1	107.2	72.1	1994.25	54.0	121.4	170.2	111.6
1994.50	53.6	75.2	105.7	71.6	1994.50	53.6	123.8	169.7	112.5
1994.75	53.3	75.0	104.8	71.4	1994.75	53.3	125.4	170.1	113.3
1995.00	52.2	75.4	104.8	70.8	1995.00	52.2	128.2	172.9	114.4
1995.25	53.0	75.6	106.2	71.6	1995.25	53.0	130.3	178.8	117.4
1995.50	53.0	76.2	106.6	71.8	1995.50	53.0	133.1	182.5	119.4
1995.75	52.6	75.6	105.3	71.2	1995.75	52.6	133.2	182.6	119.7
1996.00	53.3	77.1	105.8	72.2	1996.00	53.3	137.1	186.4	122.6
1996.25	53.4	77.8	106.5	72.6	1996.25	53.4	140.4	190.8	125.2
1996.50	54.0	79.0	107.9	73.6	1996.50	54.0	144.4	195.9	128.4
1996.75	55.6	83.6	112.2	76.7	1996.75	55.6	153.3	205.0	135.0
1997.00	55.7	84.6	114.1	77.4	1997.00	55.7	157.9	210.5	138.5
1997.25	57.0	85.7	115.4	78.7	1997.25	57.0	162.6	215.6	143.3
1997.50	60.3	87.9	117.1	81.7	1997.50	60.3	169.0	222.8	151.4
1997.75	62.8	92.6	122.7	85.5	1997.75	62.8	180.6	237.4	160.7
1998.00	64.5	95.1	129.2	88.2	1998.00	64.5	188.7	254.2	168.6
1998.25	66.0	99.1	133.8	91.0	1998.25	66.0	200.0	267.5	176.7
1998.50	67.8	101.5	136.7	93.3	1998.50	67.8	208.2	276.1	183.8
1998.75	70.6	104.4	143.9	97.1	1998.75	70.6	216.9	294.8	193.5
1999.00	72.6	105.3	146.9	99.0	1999.00	72.6	221.8	305.2	200.4
1999.25	74.3	107.0	149.0	100.9	1999.25	74.3	229.3	313.7	207.6
1999.50	75.9	109.8	151.8	103.2	1999.50	75.9	238.9	324.2	215.4
1999.75	76.8	111.8	156.1	104.9	1999.75	76.8	245.7	337.8	221.5
2000.00	78.2	113.6	158.8	106.8	2000.00	78.2	253.4	347.6	228.4
2000.25	80.0	114.6	163.2	108.9	2000.25	80.0	259.3	363.8	236.3
2000.50	81.4	118.8	166.3	111.5	2000.50	81.4	272.3	376.4	245.4
2000.75	82.7	124.6	170.6	114.5	2000.75	82.7	289.1	392.3	255.4
2001.00	83.2	126.6	172.7	115.7	2001.00	83.2	298.2	402.9	262.1

Table 16: Index Values - Office Suburban by Size

Capital Return					Total Return				
Qtrs	Small	Medium	Large	Total	Qtrs	Small	Medium	Large	Total
1983.75	100.0	100.0	100.0	100.0	1983.75	100.0	100.0	100.0	100.0
1984.00	102.0	102.0	100.8	101.7	1984.00	103.3	103.6	101.5	103.0
1984.25	103.1	104.1	103.6	103.5	1984.25	106.2	107.2	105.5	106.3
1984.50	103.6	106.1	103.5	104.3	1984.50	108.0	111.0	106.7	108.6
1984.75	104.3	106.9	104.5	105.1	1984.75	109.8	113.5	109.0	110.8
1985.00	104.8	106.4	104.2	105.2	1985.00	111.7	115.0	110.1	112.4
1985.25	105.7	107.8	105.3	106.3	1985.25	114.3	118.7	112.9	115.3
1985.50	106.5	108.0	107.2	107.1	1985.50	116.4	121.1	116.4	117.8
1985.75	107.5	107.7	108.8	107.8	1985.75	118.9	122.6	119.1	120.0
1986.00	107.4	107.9	110.9	108.2	1986.00	120.3	124.3	122.9	122.0
1986.25	107.5	108.1	111.6	108.4	1986.25	121.7	125.8	125.1	123.6
1986.50	105.5	107.8	111.5	107.3	1986.50	120.5	126.5	126.2	123.4
1986.75	103.8	107.1	111.3	106.3	1986.75	119.6	126.8	127.6	123.4
1987.00	102.7	106.8	112.2	105.8	1987.00	119.3	127.8	130.2	124.0
1987.25	99.7	104.5	112.6	103.6	1987.25	116.7	126.7	132.2	122.7
1987.50	99.9	104.8	110.8	103.5	1987.50	117.8	128.7	132.5	123.9
1987.75	96.2	103.4	110.0	101.0	1987.75	114.5	128.2	133.0	122.1
1988.00	94.4	103.3	110.6	100.1	1988.00	113.3	129.5	134.8	122.2
1988.25	94.2	102.7	110.6	99.8	1988.25	113.6	130.1	136.2	122.8
1988.50	91.7	101.9	112.7	98.6	1988.50	111.4	130.3	140.3	122.3
1988.75	90.3	100.9	113.6	97.7	1988.75	110.4	130.1	142.7	122.1
1989.00	88.5	100.9	114.7	96.8	1989.00	108.9	131.6	145.9	122.0
1989.25	85.9	100.5	115.1	95.2	1989.25	106.4	132.2	148.4	121.1
1989.50	84.1	100.9	116.0	94.3	1989.50	104.7	133.8	151.3	120.8
1989.75	81.5	99.9	117.5	92.7	1989.75	102.0	133.4	154.8	119.4
1990.00	80.0	100.9	117.8	91.9	1990.00	100.9	136.5	156.7	119.6
1990.25	77.8	99.8	117.8	90.3	1990.25	99.2	136.2	158.6	118.7
1990.50	75.3	98.2	118.0	88.3	1990.50	96.8	135.4	160.6	117.1
1990.75	70.6	93.0	114.4	83.5	1990.75	91.4	129.4	157.0	111.7
1991.00	68.0	92.2	113.0	81.3	1991.00	88.9	130.0	156.9	110.0
1991.25	66.4	90.6	111.7	79.7	1991.25	87.4	129.4	156.7	108.7
1991.50	63.6	89.6	110.4	77.3	1991.50	84.7	129.4	156.5	106.7
1991.75	58.7	80.5	105.1	71.3	1991.75	78.9	117.1	150.1	99.2
1992.00	57.7	79.7	105.5	70.5	1992.00	78.4	117.5	152.8	99.3
1992.25	55.6	77.4	103.4	68.3	1992.25	77.0	115.7	151.7	97.7
1992.50	53.3	75.7	101.9	66.0	1992.50	74.8	114.5	151.5	95.7
1992.75	50.3	71.5	95.6	62.2	1992.75	71.4	109.2	143.7	91.3
1993.00	49.7	70.4	95.3	61.6	1993.00	71.4	109.0	145.5	91.4
1993.25	49.5	68.8	93.7	60.9	1993.25	72.0	107.9	145.1	91.6
1993.50	49.1	68.0	93.6	60.4	1993.50	72.3	108.0	146.6	92.1
1993.75	48.0	66.8	88.1	58.7	1993.75	71.7	107.7	139.8	90.8
1994.00	47.7	66.8	88.6	58.6	1994.00	72.2	109.2	143.0	91.9
1994.25	47.5	67.1	89.1	58.6	1994.25	73.0	111.4	146.4	93.3
1994.50	48.0	68.1	88.0	59.0	1994.50	74.9	114.7	146.9	95.4
1994.75	47.6	69.1	88.9	59.1	1994.75	75.4	118.0	150.9	97.0
1995.00	47.8	70.1	89.6	59.5	1995.00	76.7	122.0	155.1	99.3
1995.25	47.9	70.7	89.9	59.8	1995.25	78.3	125.2	158.3	101.4
1995.50	48.4	71.8	90.7	60.4	1995.50	80.0	129.2	162.5	104.1
1995.75	49.0	74.2	91.5	61.5	1995.75	82.0	134.9	166.1	107.1
1996.00	49.4	75.9	93.4	62.5	1996.00	84.0	140.0	171.7	110.4
1996.25	49.8	77.3	96.3	63.4	1996.25	86.2	144.4	180.0	113.9
1996.50	50.6	78.1	98.2	64.4	1996.50	88.9	148.3	186.3	117.5
1996.75	52.5	81.5	103.8	67.2	1996.75	93.6	156.8	199.2	124.2
1997.00	53.5	83.6	105.4	68.5	1997.00	97.2	163.2	205.9	129.0
1997.25	54.4	85.9	109.0	70.2	1997.25	100.7	170.5	217.0	134.4
1997.50	56.1	89.9	111.4	72.6	1997.50	105.6	181.0	225.3	141.3
1997.75	58.8	94.6	120.5	76.7	1997.75	112.1	193.2	246.4	151.1
1998.00	62.1	99.7	125.3	80.7	1998.00	120.1	207.1	260.3	161.5
1998.25	64.4	103.9	131.8	84.0	1998.25	126.7	219.1	277.9	170.9
1998.50	65.7	106.3	137.9	86.2	1998.50	131.2	227.8	293.4	177.9
1998.75	67.6	108.9	141.1	88.5	1998.75	136.8	237.1	303.3	185.0
1999.00	68.7	110.0	143.4	89.8	1999.00	141.2	243.4	312.5	190.6
1999.25	69.3	111.4	146.1	90.8	1999.25	145.2	250.7	323.7	196.3
1999.50	69.9	113.2	148.2	91.9	1999.50	148.9	258.6	332.3	201.8
1999.75	70.8	114.2	151.6	93.2	1999.75	153.1	264.5	343.6	207.3
2000.00	71.6	115.1	154.0	94.2	2000.00	157.3	271.2	354.0	213.0
2000.25	72.5	116.3	158.8	95.7	2000.25	162.2	278.7	370.2	220.0
2000.50	73.3	117.9	162.3	97.0	2000.50	166.5	287.2	384.1	226.6
2000.75	74.3	120.3	167.1	98.8	2000.75	171.4	297.1	400.4	234.1
2001.00	74.5	120.5	168.8	99.1	2001.00	175.1	303.0	411.4	239.3

Table 17: Index Values - Retail by Size

Capital Return					Total Return				
Qtrs	Small	Medium	Large	Total	Qtrs	Small	Medium	Large	Total
1983.75	100.0	100.0	100.0	100.0	1983.75	100.0	100.0	100.0	100.0
1984.00	100.8	100.9	101.5	100.9	1984.00	103.1	102.7	103.4	102.9
1984.25	101.3	102.2	103.0	102.0	1984.25	105.9	105.7	106.5	105.9
1984.50	102.3	103.1	104.8	103.2	1984.50	109.3	108.3	109.8	108.9
1984.75	103.9	104.9	108.5	105.2	1984.75	113.0	112.1	114.9	112.9
1985.00	104.3	105.4	108.5	105.6	1985.00	115.8	115.1	116.7	115.6
1985.25	105.7	106.7	109.6	106.9	1985.25	119.3	119.0	119.6	119.2
1985.50	106.0	107.7	111.8	107.8	1985.50	122.2	122.6	123.2	122.5
1985.75	107.2	111.1	116.4	110.4	1985.75	125.9	128.5	130.0	127.6
1986.00	107.9	111.7	116.2	111.0	1986.00	129.1	131.8	132.2	130.7
1986.25	108.0	112.4	118.6	111.6	1986.25	132.0	135.3	137.3	134.1
1986.50	108.9	113.3	120.0	112.6	1986.50	135.4	139.1	140.6	137.7
1986.75	110.6	115.5	123.5	114.7	1986.75	139.2	144.3	146.5	142.4
1987.00	112.2	116.1	125.1	115.9	1987.00	143.0	147.5	150.6	146.0
1987.25	113.2	116.4	126.6	116.7	1987.25	146.0	150.0	154.1	148.8
1987.50	113.1	118.7	125.9	117.5	1987.50	148.1	154.4	155.4	151.8
1987.75	111.2	123.4	129.7	119.2	1987.75	147.8	162.5	160.3	155.8
1988.00	111.9	123.7	132.2	120.0	1988.00	150.9	165.4	165.3	159.1
1988.25	112.4	124.8	134.1	121.0	1988.25	153.9	168.5	170.7	162.5
1988.50	111.8	127.4	136.7	122.1	1988.50	155.3	174.6	175.6	166.4
1988.75	111.2	130.2	140.1	123.5	1988.75	156.3	181.0	182.5	170.5
1989.00	110.9	130.9	142.2	124.0	1989.00	158.3	185.0	187.9	173.9
1989.25	109.5	132.1	145.8	124.3	1989.25	159.0	188.6	195.2	176.6
1989.50	109.8	132.8	148.1	125.0	1989.50	161.5	192.1	200.6	180.0
1989.75	107.2	133.5	148.9	124.1	1989.75	160.5	196.0	203.6	181.4
1990.00	106.7	133.8	149.9	124.1	1990.00	163.0	199.8	207.0	184.5
1990.25	106.3	134.6	152.2	124.5	1990.25	165.3	204.4	212.1	188.1
1990.50	106.2	134.4	153.7	124.6	1990.50	168.2	206.9	216.6	191.1
1990.75	103.8	133.1	151.9	122.6	1990.75	168.0	208.0	216.3	191.4
1991.00	104.0	132.3	151.8	122.5	1991.00	171.8	210.2	218.8	194.5
1991.25	103.6	130.5	152.1	121.7	1991.25	174.8	211.1	222.1	196.9
1991.50	102.4	128.2	151.0	120.0	1991.50	176.4	210.8	223.7	197.8
1991.75	97.1	122.2	145.0	114.3	1991.75	170.7	204.2	216.9	191.6
1992.00	96.7	121.6	144.2	113.8	1992.00	173.2	206.4	219.1	194.0
1992.25	95.2	119.8	142.8	112.1	1992.25	174.1	206.9	220.4	194.8
1992.50	93.6	118.5	141.7	110.7	1992.50	175.2	208.1	221.6	196.0
1992.75	92.5	116.2	137.2	108.6	1992.75	176.4	207.4	218.0	195.8
1993.00	91.9	116.3	135.5	108.1	1993.00	179.1	211.5	219.0	198.8
1993.25	85.6	116.4	135.1	104.8	1993.25	170.6	215.9	222.1	196.6
1993.50	85.2	117.1	135.5	104.9	1993.50	174.2	221.0	226.0	200.9
1993.75	84.6	116.6	135.2	104.4	1993.75	177.2	223.4	228.5	203.6
1994.00	84.6	117.4	135.1	104.6	1994.00	180.6	229.2	231.9	207.9
1994.25	83.8	116.9	135.4	104.1	1994.25	182.8	232.6	236.2	210.9
1994.50	84.1	118.5	136.1	104.9	1994.50	186.9	239.6	241.6	216.3
1994.75	84.2	119.7	136.9	105.4	1994.75	189.3	245.5	245.8	220.2
1995.00	84.3	118.8	137.2	105.3	1995.00	193.5	248.5	250.8	224.2
1995.25	82.1	120.2	137.8	104.3	1995.25	193.6	256.8	256.5	227.5
1995.50	81.2	120.6	138.2	104.0	1995.50	196.1	262.3	261.9	231.5
1995.75	80.9	120.0	137.9	103.5	1995.75	199.4	266.0	265.5	235.0
1996.00	82.4	120.2	138.1	104.5	1996.00	208.7	272.1	270.8	242.9
1996.25	82.6	119.7	138.6	104.5	1996.25	214.3	276.4	276.8	248.3
1996.50	81.9	119.4	140.0	104.3	1996.50	218.1	281.5	284.4	253.2
1996.75	81.7	119.3	141.2	104.3	1996.75	222.4	286.6	291.2	258.3
1997.00	81.4	119.3	142.4	104.3	1997.00	228.3	292.7	298.3	264.6
1997.25	81.6	120.1	143.5	104.8	1997.25	235.1	300.6	306.1	272.0
1997.50	82.2	121.3	144.6	105.7	1997.50	242.7	309.1	314.3	280.2
1997.75	83.3	123.0	146.0	107.1	1997.75	251.9	319.1	323.2	289.7
1998.00	85.7	123.7	147.7	109.0	1998.00	267.2	327.4	332.7	302.1
1998.25	86.9	125.9	148.9	110.5	1998.25	278.1	339.7	342.1	313.3
1998.50	87.0	128.3	152.3	111.7	1998.50	285.5	352.7	356.5	323.8
1998.75	87.8	129.9	154.1	113.0	1998.75	295.6	363.6	367.1	334.4
1999.00	90.0	132.0	155.1	115.0	1999.00	311.6	375.4	376.6	348.0
1999.25	90.7	133.5	156.3	116.1	1999.25	322.1	387.3	387.3	359.2
1999.50	91.7	134.4	158.6	117.2	1999.50	333.2	397.1	400.1	370.3
1999.75	92.9	136.5	160.0	118.8	1999.75	345.2	410.2	411.9	382.7
2000.00	93.3	137.3	160.5	119.3	2000.00	356.6	420.7	421.6	393.4
2000.25	95.1	138.4	161.4	120.7	2000.25	371.7	432.6	432.0	406.4
2000.50	95.1	139.6	162.2	121.2	2000.50	379.2	444.7	442.5	416.2
2000.75	95.6	139.7	161.9	121.5	2000.75	388.7	453.4	450.4	425.0
2001.00	95.1	140.6	163.3	121.8	2001.00	396.9	466.1	463.2	435.8

Table 18: Index Values - Apartments by Tier

Capital Return					Total Return				
Qtrs	Tier I	Tier II	Tier III	Total	Qtrs	Tier I	Tier II	Tier III	Total
1983.75	100.0	100.0	100.0	100.0	1983.75	100.0	100.0	100.0	100.0
1984.00	101.6	100.2	103.2	102.0	1984.00	102.9	101.5	105.1	103.5
1984.25	99.9	111.8	107.4	104.3	1984.25	102.3	115.3	111.4	107.4
1984.50	100.1	115.1	107.8	105.1	1984.50	103.6	121.3	113.4	109.8
1984.75	100.8	115.5	110.0	106.2	1984.75	105.2	124.0	117.3	112.1
1985.00	100.8	115.7	110.2	106.3	1985.00	106.7	126.4	119.5	114.0
1985.25	100.8	116.0	111.2	106.6	1985.25	107.7	129.3	122.5	115.9
1985.50	102.0	122.8	112.6	108.8	1985.50	110.9	139.9	125.9	120.4
1985.75	105.7	123.7	112.7	111.3	1985.75	116.5	143.6	127.9	125.1
1986.00	105.2	127.4	113.1	111.7	1986.00	117.2	150.1	130.3	127.1
1986.25	103.2	134.2	111.6	111.0	1986.25	116.3	160.1	130.4	128.0
1986.50	103.0	135.8	110.2	110.8	1986.50	118.3	164.6	130.6	129.9
1986.75	105.5	136.6	110.8	112.6	1986.75	122.4	167.9	133.5	133.6
1987.00	103.2	139.3	111.7	111.7	1987.00	121.5	174.2	136.4	134.6
1987.25	101.3	141.3	107.6	109.9	1987.25	121.3	179.7	133.5	134.6
1987.50	101.4	148.3	106.5	110.6	1987.50	123.3	191.9	134.2	137.5
1987.75	102.9	148.0	107.4	111.9	1987.75	126.9	193.9	137.4	141.1
1988.00	103.4	148.7	107.4	112.3	1988.00	129.1	197.4	139.8	143.6
1988.25	103.6	148.9	108.5	112.7	1988.25	131.3	201.0	143.5	146.4
1988.50	105.0	151.9	108.3	114.0	1988.50	135.3	208.4	145.5	150.4
1988.75	104.3	154.2	110.7	114.5	1988.75	136.5	214.2	151.2	153.4
1989.00	105.0	156.2	109.6	115.0	1989.00	139.0	220.5	151.9	156.2
1989.25	103.3	156.6	109.6	114.1	1989.25	138.4	224.5	154.4	157.0
1989.50	104.1	157.1	109.2	114.6	1989.50	141.4	229.0	156.1	160.0
1989.75	104.0	162.8	109.8	115.7	1989.75	143.4	240.8	159.4	164.0
1990.00	104.4	163.0	109.7	115.9	1990.00	146.2	244.8	162.2	167.1
1990.25	104.9	163.0	110.0	116.3	1990.25	149.0	248.6	165.4	170.2
1990.50	104.9	162.6	109.8	116.2	1990.50	151.2	251.9	167.9	172.6
1990.75	104.0	160.4	109.3	115.1	1990.75	152.1	252.6	172.2	174.2
1991.00	102.7	157.9	109.2	113.9	1991.00	152.4	252.6	175.1	175.1
1991.25	102.1	156.4	109.1	113.2	1991.25	154.0	254.1	178.2	177.0
1991.50	101.6	154.4	107.4	112.2	1991.50	155.6	254.8	178.6	178.1
1991.75	97.0	145.2	104.5	107.1	1991.75	151.0	243.6	177.6	173.0
1992.00	96.3	143.9	103.5	106.2	1992.00	152.3	245.3	179.2	174.5
1992.25	94.2	142.5	103.4	104.7	1992.25	151.5	247.6	182.4	175.1
1992.50	93.4	141.0	103.1	103.9	1992.50	152.8	249.4	185.5	176.9
1992.75	91.9	138.7	102.0	102.4	1992.75	153.4	250.1	187.4	177.7
1993.00	92.0	137.0	101.6	102.0	1993.00	156.3	252.2	190.8	180.6
1993.25	91.9	138.2	102.1	102.3	1993.25	159.2	259.2	196.1	184.8
1993.50	92.1	139.0	102.7	102.7	1993.50	162.7	265.5	201.2	189.1
1993.75	94.9	141.5	105.4	105.4	1993.75	170.7	275.1	210.8	197.7
1994.00	95.5	142.1	105.8	105.9	1994.00	175.2	281.7	216.1	202.8
1994.25	96.0	143.8	106.7	106.7	1994.25	179.8	290.2	222.5	208.4
1994.50	96.9	144.7	107.5	107.6	1994.50	184.8	297.3	228.3	214.0
1994.75	99.6	148.5	111.7	110.9	1994.75	193.5	310.0	242.0	224.4
1995.00	100.3	149.2	112.2	111.5	1995.00	198.7	317.5	248.8	230.4
1995.25	101.1	150.3	113.3	112.4	1995.25	204.0	325.5	256.3	236.6
1995.50	101.5	150.9	114.2	113.0	1995.50	208.9	332.4	263.3	242.3
1995.75	103.9	153.0	117.8	115.6	1995.75	218.1	342.8	276.4	252.5
1996.00	104.4	155.0	119.0	116.5	1996.00	223.3	353.8	284.6	259.4
1996.25	105.3	155.8	119.4	117.3	1996.25	229.6	362.4	291.4	266.2
1996.50	106.3	157.4	120.4	118.4	1996.50	236.2	373.3	298.9	273.7
1996.75	107.6	160.1	120.8	119.7	1996.75	243.4	386.3	305.5	281.9
1997.00	108.0	160.9	121.3	120.2	1997.00	248.3	395.0	312.9	288.0
1997.25	109.0	163.3	122.0	121.5	1997.25	255.5	408.1	320.9	296.5
1997.50	110.6	165.7	122.7	123.0	1997.50	263.8	421.5	328.7	305.6
1997.75	113.1	169.2	125.0	125.6	1997.75	274.6	438.2	341.2	317.8
1998.00	114.3	170.2	126.1	126.7	1998.00	282.9	449.4	351.2	326.9
1998.25	116.2	172.9	127.1	128.6	1998.25	292.7	464.7	360.6	337.6
1998.50	118.2	176.7	128.6	130.9	1998.50	303.2	482.5	371.6	349.6
1998.75	120.0	180.7	131.8	133.4	1998.75	312.7	500.8	386.2	361.9
1999.00	121.5	182.2	132.3	134.7	1999.00	322.2	513.8	395.2	371.8
1999.25	122.3	184.1	133.6	135.8	1999.25	329.9	527.5	405.1	381.1
1999.50	123.6	185.9	134.1	137.0	1999.50	339.1	541.4	413.3	390.9
1999.75	126.0	188.8	135.8	139.3	1999.75	351.1	557.2	425.3	403.5
2000.00	126.9	190.0	136.1	140.1	2000.00	359.7	570.7	433.6	412.9
2000.25	128.7	191.6	137.0	141.6	2000.25	370.6	585.7	443.9	424.3
2000.50	130.4	192.6	138.3	143.1	2000.50	381.8	598.8	455.6	435.9
2000.75	133.3	196.7	140.7	146.1	2000.75	396.5	621.7	471.3	452.3
2001.00	134.3	198.1	140.7	146.9	2001.00	406.3	637.3	480.3	463.0

Table 19: Index Values - Industrial Warehouse by Tier

Capital Return					Total Return				
Qtrs	Tier I	Tier II	Tier III	Total	Qtrs	Tier I	Tier II	Tier III	Total
1983.75	100.0	100.0	100.0	100.0	1983.75	100.0	100.0	100.0	100.0
1984.00	102.2	100.8	102.0	101.7	1984.00	103.5	102.1	103.6	103.1
1984.25	103.0	102.0	102.6	102.6	1984.25	105.9	105.1	105.6	105.6
1984.50	105.2	103.6	104.4	104.5	1984.50	109.8	108.4	109.1	109.2
1984.75	107.0	104.9	104.5	105.9	1984.75	113.3	111.3	113.7	112.7
1985.00	108.3	106.1	105.4	107.1	1985.00	116.7	114.6	116.7	116.0
1985.25	110.5	106.7	106.2	108.5	1985.25	121.2	117.3	119.1	119.6
1985.50	113.1	108.8	107.8	110.9	1985.50	126.1	121.4	122.8	124.0
1985.75	114.1	110.1	109.2	112.0	1985.75	129.5	124.5	126.3	127.3
1986.00	113.9	110.7	109.2	112.1	1986.00	131.4	127.2	128.4	129.6
1986.25	115.3	111.5	109.5	113.2	1986.25	135.3	129.8	130.6	132.8
1986.50	117.0	111.7	110.9	114.3	1986.50	139.8	131.5	134.6	136.1
1986.75	118.2	111.7	112.8	115.1	1986.75	143.6	133.3	139.3	139.2
1987.00	118.3	112.5	115.6	115.8	1987.00	145.9	136.2	144.9	142.2
1987.25	118.6	113.5	116.6	116.5	1987.25	148.7	139.7	148.8	145.4
1987.50	120.0	113.8	118.2	117.5	1987.50	152.5	142.3	154.0	149.0
1987.75	121.4	114.0	120.4	118.6	1987.75	156.7	144.7	159.2	152.7
1988.00	122.5	115.1	120.3	119.5	1988.00	160.6	147.9	162.2	156.2
1988.25	123.5	116.0	120.8	120.4	1988.25	164.5	150.9	165.6	159.7
1988.50	124.2	116.5	120.9	120.9	1988.50	168.0	153.4	169.0	162.8
1988.75	126.5	116.4	121.4	122.1	1988.75	173.8	155.3	172.9	166.9
1989.00	127.9	115.8	122.0	122.7	1989.00	178.7	156.8	176.6	170.4
1989.25	129.5	116.4	123.3	123.9	1989.25	183.1	159.5	181.2	174.2
1989.50	131.4	117.3	123.7	125.2	1989.50	188.4	162.3	184.3	178.2
1989.75	133.1	115.3	124.5	125.3	1989.75	193.3	161.5	187.9	180.7
1990.00	132.0	113.6	124.7	124.2	1990.00	194.5	161.2	190.7	181.6
1990.25	132.3	114.5	124.9	124.8	1990.25	197.7	165.0	194.2	185.1
1990.50	131.1	112.6	124.2	123.4	1990.50	198.7	164.1	195.6	185.4
1990.75	128.9	109.9	121.6	120.9	1990.75	198.0	162.5	194.0	184.2
1991.00	127.9	108.4	120.0	119.6	1991.00	199.2	162.8	194.4	184.9
1991.25	126.6	107.8	119.0	118.7	1991.25	200.1	164.2	194.8	186.0
1991.50	124.8	106.1	116.9	116.8	1991.50	199.8	164.1	194.1	185.7
1991.75	119.0	102.5	113.1	112.1	1991.75	193.0	160.7	190.4	180.6
1992.00	118.2	101.8	112.0	111.3	1992.00	194.3	162.4	191.7	182.1
1992.25	116.0	100.3	109.0	109.2	1992.25	193.4	162.6	189.8	181.5
1992.50	113.5	99.5	107.6	107.5	1992.50	192.1	164.0	190.8	181.6
1992.75	110.2	98.0	105.6	105.1	1992.75	189.3	164.1	190.2	180.2
1993.00	109.4	97.3	104.8	104.4	1993.00	191.3	166.0	192.0	182.1
1993.25	107.1	95.6	103.8	102.4	1993.25	190.5	166.1	193.0	181.9
1993.50	105.0	95.3	104.0	101.3	1993.50	190.2	168.6	196.9	183.1
1993.75	103.1	94.4	102.4	99.8	1993.75	190.0	169.1	197.4	183.3
1994.00	103.3	94.7	102.0	99.9	1994.00	193.5	172.8	200.1	186.7
1994.25	103.1	95.4	101.2	100.0	1994.25	196.1	177.7	201.9	190.1
1994.50	103.6	96.4	101.3	100.6	1994.50	201.7	183.0	206.2	195.3
1994.75	104.7	96.9	101.1	101.3	1994.75	207.9	186.9	209.0	200.2
1995.00	106.1	98.0	102.2	102.6	1995.00	214.8	193.0	215.2	206.7
1995.25	107.5	99.8	103.6	104.1	1995.25	221.9	200.0	221.8	213.7
1995.50	108.5	100.6	105.1	105.1	1995.50	228.8	205.7	229.7	220.3
1995.75	109.5	102.0	106.6	106.4	1995.75	235.0	212.3	236.8	226.8
1996.00	110.5	103.6	107.6	107.6	1996.00	242.3	220.3	244.7	234.5
1996.25	111.1	104.8	108.4	108.5	1996.25	248.5	227.2	251.8	241.1
1996.50	113.1	106.6	109.4	110.2	1996.50	257.6	235.5	259.4	249.7
1996.75	114.1	107.8	109.8	111.3	1996.75	263.6	242.3	265.6	256.1
1997.00	115.3	109.3	110.1	112.4	1997.00	271.3	250.7	271.9	264.0
1997.25	116.9	110.7	111.5	113.9	1997.25	279.9	258.7	281.1	272.5
1997.50	119.4	113.8	115.1	116.8	1997.50	291.0	270.9	296.2	284.5
1997.75	121.4	115.5	116.5	118.6	1997.75	301.0	280.2	304.5	294.0
1998.00	122.9	116.8	118.5	120.1	1998.00	310.8	289.1	316.7	303.8
1998.25	126.5	119.2	120.4	123.1	1998.25	325.7	299.9	328.3	316.9
1998.50	129.3	121.0	122.3	125.4	1998.50	339.0	310.4	340.8	329.0
1998.75	131.6	122.6	122.4	127.1	1998.75	350.9	319.0	347.6	339.1
1999.00	132.2	124.1	122.6	128.0	1999.00	359.2	328.6	355.9	347.9
1999.25	134.0	124.3	123.9	129.2	1999.25	370.6	335.5	366.9	357.6
1999.50	136.0	125.5	125.3	130.8	1999.50	383.0	344.5	378.8	368.7
1999.75	137.2	126.5	124.4	131.6	1999.75	392.7	353.6	383.8	377.5
2000.00	138.3	126.7	124.7	132.3	2000.00	403.8	361.4	393.1	387.1
2000.25	140.4	128.7	124.6	134.0	2000.25	417.1	373.1	401.0	399.0
2000.50	141.9	130.7	126.8	135.8	2000.50	429.6	385.7	416.0	412.0
2000.75	143.8	133.0	126.5	137.5	2000.75	443.2	399.2	424.4	424.8
2001.00	145.5	133.8	125.9	138.5	2001.00	457.2	409.1	435.6	436.8

Table 20: Index Values - Office CBD by Tier

Capital Return					Total Return				
Qtrs	Tier I	Tier II	Tier III	Total	Qtrs	Tier I	Tier II	Tier III	Total
1983.75	100.0	100.0	100.0	100.0	1983.75	100.0	100.0	100.0	100.0
1984.00	101.6	100.2	103.2	102.0	1984.00	102.9	101.5	105.1	103.5
1984.25	99.9	111.8	107.4	104.3	1984.25	102.3	115.3	111.4	107.4
1984.50	100.1	115.1	107.8	105.1	1984.50	103.6	121.3	113.4	109.8
1984.75	100.8	115.5	110.0	106.2	1984.75	105.2	124.0	117.3	112.1
1985.00	100.8	115.7	110.2	106.3	1985.00	106.7	126.4	119.5	114.0
1985.25	100.8	116.0	111.2	106.6	1985.25	107.7	129.3	122.5	115.9
1985.50	102.0	122.8	112.6	108.8	1985.50	110.9	139.9	125.9	120.4
1985.75	105.7	123.7	112.7	111.3	1985.75	116.5	143.6	127.9	125.1
1986.00	105.2	127.4	113.1	111.7	1986.00	117.2	150.1	130.3	127.1
1986.25	103.2	134.2	111.6	111.0	1986.25	116.3	160.1	130.4	128.0
1986.50	103.0	135.8	110.2	110.8	1986.50	118.3	164.6	130.6	129.9
1986.75	105.5	136.6	110.8	112.6	1986.75	122.4	167.9	133.5	133.6
1987.00	103.2	139.3	111.7	111.7	1987.00	121.5	174.2	136.4	134.6
1987.25	101.3	141.3	107.6	109.9	1987.25	121.3	179.7	133.5	134.6
1987.50	101.4	148.3	106.5	110.6	1987.50	123.3	191.9	134.2	137.5
1987.75	102.9	148.0	107.4	111.9	1987.75	126.9	193.9	137.4	141.1
1988.00	103.4	148.7	107.4	112.3	1988.00	129.1	197.4	139.8	143.6
1988.25	103.6	148.9	108.5	112.7	1988.25	131.3	201.0	143.5	146.4
1988.50	105.0	151.9	108.3	114.0	1988.50	135.3	208.4	145.5	150.4
1988.75	104.3	154.2	110.7	114.5	1988.75	136.5	214.2	151.2	153.4
1989.00	105.0	156.2	109.6	115.0	1989.00	139.0	220.5	151.9	156.2
1989.25	103.3	156.6	109.6	114.1	1989.25	138.4	224.5	154.4	157.0
1989.50	104.1	157.1	109.2	114.6	1989.50	141.4	229.0	156.1	160.0
1989.75	104.0	162.8	109.8	115.7	1989.75	143.4	240.8	159.4	164.0
1990.00	104.4	163.0	109.7	115.9	1990.00	146.2	244.8	162.2	167.1
1990.25	104.9	163.0	110.0	116.3	1990.25	149.0	248.6	165.4	170.2
1990.50	104.9	162.6	109.8	116.2	1990.50	151.2	251.9	167.9	172.6
1990.75	104.0	160.4	109.3	115.1	1990.75	152.1	252.6	172.2	174.2
1991.00	102.7	157.9	109.2	113.9	1991.00	152.4	252.6	175.1	175.1
1991.25	102.1	156.4	109.1	113.2	1991.25	154.0	254.1	178.2	177.0
1991.50	101.6	154.4	107.4	112.2	1991.50	155.6	254.8	178.6	178.1
1991.75	97.0	145.2	104.5	107.1	1991.75	151.0	243.6	177.6	173.0
1992.00	96.3	143.9	103.5	106.2	1992.00	152.3	245.3	179.2	174.5
1992.25	94.2	142.5	103.4	104.7	1992.25	151.5	247.6	182.4	175.1
1992.50	93.4	141.0	103.1	103.9	1992.50	152.8	249.4	185.5	176.9
1992.75	91.9	138.7	102.0	102.4	1992.75	153.4	250.1	187.4	177.7
1993.00	92.0	137.0	101.6	102.0	1993.00	156.3	252.2	190.8	180.6
1993.25	91.9	138.2	102.1	102.3	1993.25	159.2	259.2	196.1	184.8
1993.50	92.1	139.0	102.7	102.7	1993.50	162.7	265.5	201.2	189.1
1993.75	94.9	141.5	105.4	105.4	1993.75	170.7	275.1	210.8	197.7
1994.00	95.5	142.1	105.8	105.9	1994.00	175.2	281.7	216.1	202.8
1994.25	96.0	143.8	106.7	106.7	1994.25	179.8	290.2	222.5	208.4
1994.50	96.9	144.7	107.5	107.6	1994.50	184.8	297.3	228.3	214.0
1994.75	99.6	148.5	111.7	110.9	1994.75	193.5	310.0	242.0	224.4
1995.00	100.3	149.2	112.2	111.5	1995.00	198.7	317.5	248.8	230.4
1995.25	101.1	150.3	113.3	112.4	1995.25	204.0	325.5	256.3	236.6
1995.50	101.5	150.9	114.2	113.0	1995.50	208.9	332.4	263.3	242.3
1995.75	103.9	153.0	117.8	115.6	1995.75	218.1	342.8	276.4	252.5
1996.00	104.4	155.0	119.0	116.5	1996.00	223.3	353.8	284.6	259.4
1996.25	105.3	155.8	119.4	117.3	1996.25	229.6	362.4	291.4	266.2
1996.50	106.3	157.4	120.4	118.4	1996.50	236.2	373.3	298.9	273.7
1996.75	107.6	160.1	120.8	119.7	1996.75	243.4	386.3	305.5	281.9
1997.00	108.0	160.9	121.3	120.2	1997.00	248.3	395.0	312.9	288.0
1997.25	109.0	163.3	122.0	121.5	1997.25	255.5	408.1	320.9	296.5
1997.50	110.6	165.7	122.7	123.0	1997.50	263.8	421.5	328.7	305.6
1997.75	113.1	169.2	125.0	125.6	1997.75	274.6	438.2	341.2	317.8
1998.00	114.3	170.2	126.1	126.7	1998.00	282.9	449.4	351.2	326.9
1998.25	116.2	172.9	127.1	128.6	1998.25	292.7	464.7	360.6	337.6
1998.50	118.2	176.7	128.6	130.9	1998.50	303.2	482.5	371.6	349.6
1998.75	120.0	180.7	131.8	133.4	1998.75	312.7	500.8	386.2	361.9
1999.00	121.5	182.2	132.3	134.7	1999.00	322.2	513.8	395.2	371.8
1999.25	122.3	184.1	133.6	135.8	1999.25	329.9	527.5	405.1	381.1
1999.50	123.6	185.9	134.1	137.0	1999.50	339.1	541.4	413.3	390.9
1999.75	126.0	188.8	135.8	139.3	1999.75	351.1	557.2	425.3	403.5
2000.00	126.9	190.0	136.1	140.1	2000.00	359.7	570.7	433.6	412.9
2000.25	128.7	191.6	137.0	141.6	2000.25	370.6	585.7	443.9	424.3
2000.50	130.4	192.6	138.3	143.1	2000.50	381.8	598.8	455.6	435.9
2000.75	133.3	196.7	140.7	146.1	2000.75	396.5	621.7	471.3	452.3
2001.00	134.3	198.1	140.7	146.9	2001.00	406.3	637.3	480.3	463.0

Table 21: Index Values - Office Suburban by Tier

Capital Return					Total Return				
Qtrs	Tier I	Tier II	Tier III	Total	Qtrs	Tier I	Tier II	Tier III	Total
1983.75	100.0	100.0	100.0	100.0	1983.75	100.0	100.0	100.0	100.0
1984.00	101.2	102.1	101.9	101.7	1984.00	102.4	103.2	103.3	103.0
1984.25	102.3	103.9	104.0	103.3	1984.25	105.2	106.5	106.7	106.0
1984.50	103.9	104.5	103.6	104.1	1984.50	108.2	108.5	107.9	108.3
1984.75	106.1	103.9	104.7	104.9	1984.75	112.0	108.9	110.4	110.4
1985.00	106.7	103.4	104.6	104.9	1985.00	114.4	109.5	112.2	111.9
1985.25	108.4	104.4	105.3	106.1	1985.25	118.2	111.8	115.0	114.9
1985.50	110.2	104.8	104.8	107.0	1985.50	121.8	113.9	116.1	117.5
1985.75	112.7	104.4	104.5	107.8	1985.75	125.8	114.8	117.8	119.8
1986.00	113.7	104.6	104.3	108.2	1986.00	128.6	116.2	119.3	121.8
1986.25	113.7	104.7	105.7	108.6	1986.25	130.2	117.4	122.1	123.4
1986.50	114.8	102.1	103.5	107.5	1986.50	132.8	115.2	121.0	123.3
1986.75	115.5	98.8	104.3	106.5	1986.75	135.1	112.2	123.2	123.4
1987.00	115.1	97.9	104.3	106.0	1987.00	136.0	111.9	125.1	123.9
1987.25	113.9	93.6	104.8	103.7	1987.25	136.6	107.8	126.2	122.5
1987.50	114.8	92.8	104.4	103.7	1987.50	139.6	107.9	127.2	123.9
1987.75	113.6	88.8	103.3	101.2	1987.75	140.0	104.0	126.9	122.1
1988.00	112.7	88.0	102.6	100.3	1988.00	140.5	103.6	127.2	122.2
1988.25	111.9	87.9	102.4	100.0	1988.25	141.1	103.9	128.2	122.7
1988.50	110.9	85.8	103.0	98.8	1988.50	141.4	102.1	129.7	122.3
1988.75	110.6	85.0	100.6	97.9	1988.75	142.4	101.4	128.2	122.1
1989.00	110.8	83.7	98.6	97.1	1989.00	144.0	100.6	127.3	122.2
1989.25	109.8	82.1	96.3	95.6	1989.25	143.9	99.4	125.6	121.3
1989.50	109.1	81.0	95.2	94.7	1989.50	144.2	98.8	124.9	121.0
1989.75	107.9	79.0	92.5	92.8	1989.75	143.5	97.1	122.1	119.5
1990.00	107.7	77.6	91.9	92.1	1990.00	144.6	96.3	122.2	119.6
1990.25	106.8	76.4	88.0	90.4	1990.25	144.9	95.8	118.3	118.8
1990.50	104.1	74.6	86.5	88.4	1990.50	142.6	94.4	117.7	117.2
1990.75	98.1	70.7	81.2	83.4	1990.75	135.1	90.3	112.2	111.5
1991.00	95.0	69.4	78.9	81.2	1991.00	132.0	89.5	110.9	109.8
1991.25	93.7	67.9	76.7	79.6	1991.25	131.1	88.4	109.3	108.7
1991.50	89.9	67.2	73.5	77.2	1991.50	126.9	88.5	106.5	106.5
1991.75	82.9	61.3	68.7	71.1	1991.75	118.0	81.5	100.3	99.0
1992.00	82.1	60.7	67.1	70.2	1992.00	118.4	81.6	99.3	99.0
1992.25	79.8	58.3	65.3	68.0	1992.25	117.0	79.5	98.2	97.3
1992.50	77.2	56.4	62.5	65.6	1992.50	114.6	78.3	94.6	95.3
1992.75	71.6	54.3	59.5	62.0	1992.75	107.6	76.1	91.4	90.9
1993.00	70.5	53.9	59.3	61.3	1993.00	107.3	76.2	92.5	91.0
1993.25	69.1	54.1	58.4	60.6	1993.25	106.8	77.2	92.3	91.2
1993.50	67.8	54.1	58.6	60.1	1993.50	106.1	78.0	94.2	91.6
1993.75	64.9	53.3	58.1	58.5	1993.75	103.0	78.0	94.8	90.4
1994.00	64.5	53.2	58.3	58.3	1994.00	104.0	78.8	96.7	91.4
1994.25	64.4	52.9	59.1	58.3	1994.25	105.2	79.8	99.2	92.8
1994.50	64.6	53.6	59.8	58.7	1994.50	106.9	82.3	101.9	94.9
1994.75	64.2	54.4	59.7	58.8	1994.75	107.7	85.0	103.2	96.5
1995.00	64.5	55.1	60.1	59.3	1995.00	109.9	87.5	105.7	98.8
1995.25	64.9	55.2	60.4	59.5	1995.25	112.7	89.1	108.0	101.0
1995.50	65.7	56.2	60.3	60.3	1995.50	115.6	92.3	109.2	103.7
1995.75	67.2	57.3	60.7	61.3	1995.75	119.4	95.2	111.2	106.7
1996.00	68.6	58.1	61.3	62.3	1996.00	123.8	98.0	114.0	110.1
1996.25	69.3	59.1	62.8	63.3	1996.25	126.9	101.4	119.0	113.7
1996.50	70.4	60.1	63.7	64.3	1996.50	130.8	104.5	123.2	117.3
1996.75	74.0	62.4	66.4	67.2	1996.75	139.3	109.6	130.5	124.1
1997.00	75.7	64.0	66.9	68.5	1997.00	144.9	114.3	134.3	128.9
1997.25	78.0	65.4	67.9	70.2	1997.25	152.1	118.8	139.0	134.4
1997.50	80.3	68.1	70.2	72.7	1997.50	159.2	125.6	146.4	141.4
1997.75	85.4	72.3	72.5	76.7	1997.75	171.7	134.8	153.4	151.3
1998.00	89.3	77.8	74.4	80.7	1998.00	182.5	147.4	159.8	161.7
1998.25	93.6	80.7	77.3	84.1	1998.25	194.4	155.1	169.0	171.2
1998.50	96.2	82.5	79.3	86.3	1998.50	202.6	160.9	176.1	178.2
1998.75	98.2	85.4	81.3	88.6	1998.75	209.6	168.6	183.2	185.4
1999.00	99.9	86.5	82.2	89.9	1999.00	216.2	173.5	188.6	191.0
1999.25	100.9	87.8	83.2	91.0	1999.25	222.0	179.3	194.6	196.8
1999.50	102.2	89.2	84.0	92.2	1999.50	227.8	184.9	200.4	202.5
1999.75	103.5	90.6	84.8	93.4	1999.75	234.0	190.2	205.6	208.0
2000.00	104.8	91.9	85.0	94.5	2000.00	240.5	196.1	209.7	213.7
2000.25	107.0	93.2	85.7	95.9	2000.25	249.6	201.9	215.3	220.7
2000.50	109.3	94.2	86.1	97.3	2000.50	258.6	208.0	219.8	227.4
2000.75	112.1	95.9	86.5	99.1	2000.75	269.3	214.5	224.0	235.0
2001.00	113.1	95.8	86.7	99.5	2001.00	276.3	218.3	228.8	240.2

Table 22: Index Values - Industrial R&D + Flex by Tier

Capital Return					Total Return				
Qtrs	Tier I	Tier II	Tier III	Total	Qtrs	Tier I	Tier II	Tier III	Total
1983.75	100.0	100.0	100.0	100.0	1983.75	100.0	100.0	100.0	100.0
1984.00	99.7	105.2	102.6	103.5	1984.00	101.5	106.2	104.5	104.9
1984.25	101.1	109.0	103.1	106.1	1984.25	104.7	111.5	106.7	109.0
1984.50	103.5	110.5	105.2	107.9	1984.50	108.8	114.6	110.8	112.6
1984.75	106.3	112.5	106.5	110.0	1984.75	113.8	118.4	113.9	116.5
1985.00	107.2	115.3	106.4	111.7	1985.00	116.9	123.4	116.1	120.6
1985.25	107.7	115.6	106.8	112.1	1985.25	119.3	125.9	118.6	123.0
1985.50	108.6	116.8	108.3	113.3	1985.50	122.2	129.0	121.9	126.2
1985.75	112.0	116.5	109.4	114.2	1985.75	127.9	130.9	125.3	129.3
1986.00	113.3	113.2	108.6	112.5	1986.00	131.4	129.2	126.6	129.4
1986.25	114.3	114.1	109.2	113.4	1986.25	134.4	131.9	128.9	132.1
1986.50	115.5	114.7	108.0	113.8	1986.50	137.3	134.2	128.7	134.1
1986.75	117.6	112.8	109.5	113.5	1986.75	141.5	133.5	131.9	135.3
1987.00	118.5	111.8	108.2	112.9	1987.00	144.6	134.2	131.4	136.4
1987.25	118.0	112.3	106.6	112.8	1987.25	146.2	136.5	130.5	137.9
1987.50	118.7	112.4	106.9	113.0	1987.50	149.1	138.4	133.3	140.2
1987.75	120.3	111.2	105.5	112.5	1987.75	152.9	138.5	133.3	141.3
1988.00	122.1	110.3	104.2	112.2	1988.00	156.7	139.3	134.0	142.8
1988.25	123.2	110.2	106.3	112.9	1988.25	159.6	140.7	137.9	145.0
1988.50	125.3	110.5	105.9	113.6	1988.50	164.5	143.2	139.0	147.9
1988.75	126.4	109.8	106.4	113.6	1988.75	167.7	143.4	140.5	149.2
1989.00	126.1	111.2	107.3	114.4	1989.00	169.8	147.5	143.6	152.5
1989.25	125.4	111.2	106.9	114.1	1989.25	171.1	149.1	144.5	153.9
1989.50	126.1	111.1	106.2	114.2	1989.50	174.4	150.7	145.5	156.0
1989.75	124.3	111.4	107.2	114.0	1989.75	174.2	152.9	147.5	157.5
1990.00	125.3	111.1	106.7	114.0	1990.00	178.2	154.5	149.1	159.8
1990.25	124.5	110.4	106.3	113.3	1990.25	179.6	155.4	151.0	161.0
1990.50	123.6	109.7	105.3	112.5	1990.50	180.8	155.9	151.5	161.7
1990.75	120.1	102.0	102.7	107.1	1990.75	179.7	146.3	150.1	156.1
1991.00	118.2	100.2	101.4	105.4	1991.00	179.1	145.7	150.4	155.7
1991.25	116.9	99.6	99.0	104.2	1991.25	179.8	147.6	148.9	156.5
1991.50	108.6	97.3	97.6	100.0	1991.50	169.8	146.2	148.9	152.4
1991.75	106.1	91.5	94.1	95.8	1991.75	168.2	139.6	145.7	148.3
1992.00	102.6	88.3	92.0	92.8	1992.00	165.5	136.8	144.0	145.8
1992.25	101.1	86.6	87.4	90.7	1992.25	165.4	136.4	139.2	144.7
1992.50	96.2	84.6	86.8	87.9	1992.50	159.5	135.5	140.3	142.5
1992.75	91.8	80.5	84.5	84.1	1992.75	154.4	131.1	138.7	138.4
1993.00	89.2	78.7	84.3	82.3	1993.00	152.4	130.5	140.8	137.9
1993.25	88.2	78.0	84.7	81.8	1993.25	153.1	131.5	143.9	139.2
1993.50	85.9	77.9	83.6	80.7	1993.50	151.8	133.4	144.9	139.8
1993.75	84.5	77.2	82.7	79.8	1993.75	151.9	134.1	146.9	140.6
1994.00	84.6	76.5	82.9	79.5	1994.00	154.7	135.6	150.9	142.9
1994.25	84.5	76.9	82.4	79.6	1994.25	157.1	138.6	152.6	145.5
1994.50	83.7	77.1	82.9	79.5	1994.50	157.8	141.8	156.5	147.9
1994.75	82.9	78.1	82.7	79.6	1994.75	158.5	145.7	159.0	150.4
1995.00	83.5	78.8	83.6	80.4	1995.00	163.1	149.8	164.6	154.9
1995.25	83.8	80.0	83.7	81.0	1995.25	166.9	154.9	168.8	159.3
1995.50	84.4	80.9	83.5	81.6	1995.50	172.0	159.6	172.7	163.9
1995.75	84.9	81.5	82.6	81.8	1995.75	176.0	163.2	173.9	167.1
1996.00	86.8	82.3	83.1	83.0	1996.00	183.5	168.4	178.1	172.9
1996.25	88.5	82.9	82.5	83.8	1996.25	191.6	173.2	179.8	178.3
1996.50	90.4	85.3	82.7	85.5	1996.50	199.1	181.3	183.6	185.1
1996.75	93.4	87.3	85.5	88.0	1996.75	209.5	189.2	192.0	193.9
1997.00	95.0	91.2	86.6	90.4	1997.00	217.6	201.0	197.6	202.8
1997.25	99.1	94.5	88.8	93.6	1997.25	231.0	212.2	206.5	214.0
1997.50	103.2	97.9	90.8	96.9	1997.50	244.2	224.2	214.6	225.3
1997.75	110.5	102.6	93.2	102.0	1997.75	266.5	239.3	224.1	241.4
1998.00	113.9	105.2	95.0	104.6	1998.00	280.6	250.8	232.9	253.0
1998.25	120.1	109.2	97.8	109.0	1998.25	300.6	265.6	244.3	268.6
1998.50	121.9	114.0	99.3	111.9	1998.50	310.4	282.5	253.1	280.7
1998.75	124.1	115.3	103.4	114.3	1998.75	321.9	289.8	267.7	291.3
1999.00	126.2	116.6	102.5	115.3	1999.00	334.3	298.0	270.0	299.2
1999.25	128.1	118.0	104.4	116.9	1999.25	345.4	306.3	281.2	309.1
1999.50	128.7	119.9	106.4	118.4	1999.50	353.3	317.2	292.2	319.0
1999.75	130.1	122.3	108.5	120.4	1999.75	363.8	328.5	303.5	329.8
2000.00	132.2	124.7	109.5	122.3	2000.00	376.2	341.5	312.4	341.4
2000.25	137.5	126.6	110.4	125.1	2000.25	395.8	353.2	319.3	354.5
2000.50	148.9	127.2	110.0	129.1	2000.50	435.4	361.6	324.6	372.4
2000.75	153.1	133.0	110.7	133.0	2000.75	455.2	384.1	331.0	389.4
2001.00	154.2	132.8	112.6	133.8	2001.00	466.4	391.2	342.1	399.0

Table 23: Index Values - Retail by Tier

Capital Return					Total Return				
Qtrs	Tier I	Tier II	Tier III	Total	Qtrs	Tier I	Tier II	Tier III	Total
1983.75	100.0	100.0	100.0	100.0	1983.75	100.0	100.0	100.0	100.0
1984.00	100.7	100.7	101.7	100.9	1984.00	102.4	102.9	104.1	102.9
1984.25	101.9	102.4	102.5	102.1	1984.25	105.3	106.3	107.1	106.0
1984.50	103.0	103.9	106.0	103.8	1984.50	108.0	109.7	113.2	109.5
1984.75	105.8	105.6	106.4	105.9	1984.75	112.6	113.6	115.9	113.6
1985.00	105.7	105.9	109.4	106.5	1985.00	114.6	116.1	121.6	116.4
1985.25	107.3	108.0	109.1	107.9	1985.25	118.5	120.9	123.8	120.3
1985.50	108.3	110.4	109.4	109.2	1985.50	121.8	125.2	126.9	123.9
1985.75	111.0	112.8	111.8	111.8	1985.75	126.8	130.2	131.8	128.9
1986.00	111.0	114.1	113.2	112.4	1986.00	129.3	133.8	136.3	132.0
1986.25	112.0	114.1	113.8	113.0	1986.25	132.9	136.6	140.1	135.4
1986.50	112.3	115.2	115.7	113.8	1986.50	135.3	140.8	144.9	138.7
1986.75	114.7	116.7	117.9	116.0	1986.75	140.3	144.9	148.8	143.3
1987.00	115.8	117.5	120.2	117.1	1987.00	144.0	147.7	153.4	146.8
1987.25	116.5	117.8	122.5	118.0	1987.25	146.7	150.1	157.6	149.7
1987.50	118.0	118.9	122.3	119.1	1987.50	150.3	153.0	159.8	152.9
1987.75	120.7	120.9	122.0	121.1	1987.75	156.2	156.1	161.5	157.3
1988.00	121.4	121.9	123.5	122.1	1988.00	159.3	159.4	165.6	160.6
1988.25	122.4	122.6	124.6	122.9	1988.25	162.6	162.1	170.5	164.0
1988.50	124.2	125.4	123.3	124.5	1988.50	167.5	167.9	170.6	168.4
1988.75	125.5	128.0	123.1	126.0	1988.75	171.6	172.9	173.3	172.5
1989.00	126.5	127.7	123.1	126.4	1989.00	175.3	175.2	176.8	175.8
1989.25	126.9	126.5	125.7	126.8	1989.25	178.4	176.1	182.6	178.7
1989.50	128.0	125.9	126.2	127.3	1989.50	182.2	177.6	185.6	181.7
1989.75	126.7	125.2	126.2	126.3	1989.75	182.9	179.5	188.8	183.1
1990.00	126.8	124.9	126.3	126.3	1990.00	185.9	182.1	192.9	186.3
1990.25	127.1	124.8	127.1	126.6	1990.25	188.9	185.3	197.6	189.7
1990.50	126.9	124.4	127.8	126.5	1990.50	191.5	187.7	201.7	192.5
1990.75	124.3	121.9	128.1	124.6	1990.75	190.7	186.9	206.2	192.8
1991.00	123.4	122.3	128.4	124.3	1991.00	192.4	190.7	210.8	195.7
1991.25	122.6	121.0	127.4	123.3	1991.25	194.5	192.2	213.2	197.7
1991.50	120.7	119.2	126.1	121.6	1991.50	194.6	193.2	215.1	198.4
1991.75	115.6	112.8	121.0	116.1	1991.75	189.3	185.7	210.5	192.7
1992.00	114.7	113.2	120.5	115.7	1992.00	190.9	188.9	213.8	195.1
1992.25	112.6	111.4	118.8	113.8	1992.25	191.0	188.9	215.1	195.4
1992.50	110.7	108.9	117.7	111.9	1992.50	191.0	188.0	217.4	195.7
1992.75	108.0	106.3	116.9	109.6	1992.75	189.6	187.0	219.2	195.1
1993.00	107.1	106.4	117.0	109.2	1993.00	191.8	190.6	223.7	198.1
1993.25	105.1	104.3	112.1	106.5	1993.25	191.7	190.3	219.0	197.0
1993.50	105.5	104.1	111.7	106.6	1993.50	195.8	193.8	223.1	200.9
1993.75	104.7	104.6	110.5	106.0	1993.75	197.4	197.9	225.4	203.4
1994.00	105.2	104.9	109.8	106.2	1994.00	202.1	202.0	228.5	207.6
1994.25	105.0	104.4	108.7	105.8	1994.25	205.4	205.5	230.9	210.7
1994.50	105.9	104.6	109.3	106.4	1994.50	210.6	209.8	236.6	215.8
1994.75	106.6	105.3	108.0	106.7	1994.75	214.7	213.6	237.9	219.3
1995.00	106.9	105.6	105.8	106.5	1995.00	219.4	218.4	238.1	223.1
1995.25	107.5	104.4	103.5	105.7	1995.25	224.9	220.9	238.9	226.5
1995.50	107.2	104.0	103.4	105.5	1995.50	228.3	224.9	244.7	230.7
1995.75	106.8	102.9	103.7	105.1	1995.75	231.2	227.1	250.9	234.3
1996.00	106.9	102.9	103.5	105.1	1996.00	236.7	232.1	256.6	239.7
1996.25	106.6	102.9	102.8	104.8	1996.25	240.3	237.0	261.0	243.9
1996.50	106.8	103.5	100.9	104.5	1996.50	245.4	243.7	262.4	248.4
1996.75	107.1	103.1	101.1	104.6	1996.75	250.4	247.2	268.4	253.3
1997.00	107.3	103.2	100.9	104.6	1997.00	255.6	253.5	275.9	259.4
1997.25	107.8	104.4	101.7	105.4	1997.25	261.7	262.1	284.6	266.8
1997.50	108.6	105.1	102.8	106.3	1997.50	268.5	269.8	294.2	274.5
1997.75	109.4	107.2	105.1	107.8	1997.75	275.2	280.2	307.9	284.0
1998.00	109.8	108.5	105.3	108.5	1998.00	281.8	290.6	317.2	292.3
1998.25	111.7	109.5	107.3	110.1	1998.25	292.1	300.0	331.1	303.2
1998.50	113.3	110.6	107.8	111.3	1998.50	302.1	309.7	340.4	312.9
1998.75	114.7	112.5	108.7	112.7	1998.75	311.4	321.1	351.8	323.3
1999.00	116.2	115.2	110.1	114.5	1999.00	321.3	335.2	366.1	335.4
1999.25	117.7	116.2	111.2	115.7	1999.25	331.9	345.6	378.7	346.4
1999.50	119.0	116.7	112.1	116.7	1999.50	341.4	354.7	390.9	356.4
1999.75	120.1	119.9	112.7	118.2	1999.75	350.7	371.5	402.5	368.2
2000.00	120.7	120.9	112.8	118.8	2000.00	359.8	382.8	414.2	378.4
2000.25	121.9	122.3	115.1	120.4	2000.25	370.8	395.5	432.4	391.5
2000.50	122.7	122.7	115.3	120.9	2000.50	380.6	405.1	440.2	400.8
2000.75	123.1	122.3	115.2	121.0	2000.75	389.2	411.9	447.8	408.8
2001.00	123.4	122.9	115.2	121.3	2001.00	399.0	423.2	458.9	419.3

Tier Analysis		Income Return				Capital Return				Total Return			
		Tier I	Tier II	Tier III	Total	Tier I	Tier II	Tier III	Total	Tier I	Tier II	Tier III	Total
Apartments	Average Return	6.54%	6.92%	7.26%	6.78%	2.07%	3.90%	2.28%	2.45%	8.71%	11.02%	9.66%	9.35%
	Stan Deviation	1.08%	0.77%	0.94%	0.86%	3.62%	5.22%	3.58%	3.42%	4.28%	5.69%	3.95%	3.80%
Warehouse	Average Return	6.95%	6.85%	7.72%	7.02%	2.25%	1.76%	1.19%	1.92%	9.32%	8.71%	8.98%	9.05%
	Stan Deviation	0.84%	1.02%	1.32%	0.88%	4.78%	4.00%	3.94%	4.26%	5.46%	4.80%	4.69%	4.96%
Office CBD	Average Return	5.34%	4.95%	4.31%	5.02%	1.83%	-0.50%	-0.70%	0.53%	7.27%	4.52%	3.64%	5.63%
	Stan Deviation	1.16%	1.62%	2.47%	1.24%	9.03%	8.90%	7.53%	8.18%	9.78%	10.72%	9.14%	9.52%
Office Suburban	Average Return	5.55%	5.11%	5.90%	5.45%	0.56%	-0.29%	-0.72%	-0.10%	6.16%	4.86%	5.19%	5.38%
	Stan Deviation	1.18%	1.55%	1.39%	1.28%	8.59%	8.68%	7.36%	8.13%	9.65%	9.98%	8.48%	9.29%
R&D and Flex	Average Return	6.79%	6.52%	6.76%	6.66%	2.65%	1.25%	0.93%	1.68%	9.59%	7.85%	7.75%	8.44%
	Stan Deviation	1.08%	1.19%	1.41%	1.07%	8.35%	7.87%	5.17%	7.21%	9.23%	8.89%	6.04%	8.14%
Retail	Average Return	7.14%	7.54%	8.38%	7.54%	1.88%	2.01%	1.03%	1.70%	9.13%	9.66%	9.48%	9.35%
	Stan Deviation	0.83%	1.37%	1.48%	1.11%	4.09%	4.64%	3.73%	3.98%	4.46%	5.25%	4.18%	4.42%

Table 24: Tier Portfolio Average Annual Returns and Standard Deviation (of annual returns)

Note: The total return has been calculated from the quarterly returns and annualized, thus it is not exactly the sum of the annual income and capital return.

Size Analysis		Income Return				Capital Return				Total Return			
		Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total
Apartments	Average Return	6.67%	6.84%	6.74%	6.80%	-0.23%	2.58%	5.62%	2.41%	6.45%	9.55%	12.63%	9.34%
	Stan Deviation	1.20%	0.93%	1.18%	0.87%	6.50%	3.22%	6.76%	3.41%	7.28%	3.65%	6.89%	3.74%
R&D and Flex	Average Return	6.54%	6.87%	6.56%	6.66%	-0.41%	2.41%	5.40%	1.67%	6.14%	9.42%	12.21%	8.43%
	Stan Deviation	1.50%	0.93%	1.11%	1.10%	7.21%	6.48%	9.58%	7.08%	8.48%	7.26%	10.00%	8.01%
Warehouse	Average Return	7.20%	7.18%	6.49%	7.05%	0.68%	2.52%	3.79%	1.81%	7.93%	9.84%	10.46%	8.97%
	Stan Deviation	1.08%	0.88%	0.71%	0.89%	4.05%	4.11%	5.17%	4.22%	5.01%	4.73%	5.52%	4.96%
Office CBD	Average Return	4.79%	5.23%	5.24%	5.02%	-0.60%	1.57%	3.25%	1.07%	4.25%	6.88%	8.62%	6.18%
	Stan Deviation	1.76%	1.14%	1.02%	1.16%	8.77%	7.20%	7.88%	7.80%	10.54%	7.92%	8.48%	8.98%
Office Suburban	Average Return	5.24%	5.73%	5.57%	5.45%	-1.61%	0.90%	2.66%	-0.13%	3.63%	6.69%	8.35%	5.36%
	Stan Deviation	1.56%	1.24%	1.07%	1.29%	8.51%	7.84%	7.47%	8.04%	9.93%	8.87%	8.04%	9.20%
Retail	Average Return	8.69%	7.28%	6.44%	7.75%	0.42%	2.63%	3.35%	1.79%	9.14%	10.05%	9.95%	9.64%
	Stan Deviation	1.65%	0.90%	1.25%	1.19%	4.57%	4.16%	4.07%	4.07%	5.55%	4.51%	4.44%	4.60%

Table 25: Size Portfolio Average Annual Returns and Standard Deviation (of annual returns)

Note: The total return has been calculated from the quarterly returns and annualized, thus it is not exactly the sum of the annual income and capital return.